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Abstract

The master thesis aims to apply tools and methods of co-design to explore a sustainable future of allotment gardening. A sustainable allotment garden involves the wider community in gardening activities by innovating a new model to achieve inclusivity.

Allotment gardening brings various values to the city in many aspects including organic production, culture, history, social cohesion and wellbeing. However, allotment gardens are operated in an outdated way and gradually became isolated communities. In Helsinki, allotment gardening is getting popular among young families but increasingly more expensive in the meanwhile. The wider community is not familiar with allotment gardening and has little interaction with the garden community. In order to develop in a sustainable way, many garden associations are aware of the importance of inclusivity and establish a closer connection with the neighborhoods. However, they are not clear about how to do it. This project is dedicated to creating a shared understanding between allotment gardeners and the wider community, and design a strategy for an inclusive allotment garden for the year of 2030.

The research process is also a test of co-design. The Change Theory by Kurt Lewin, consisting of his Field Theory, Group Dynamics and Action Plan, is used as a theoretical foundation for this research. Following this approach, multiple research methods, including site visiting, semi-structured interviews, survey and participant observation were utilized in different stages to comprehensively study different types of target groups to get insights on group behaviors and activities of gardeners and non-gardeners. Referring to the theories of Communities of Practice and Communities of Interests, a co-design workshop was designed to build mutual understanding and to co-envision a wider inclusive future. Concepts co-created by the participants were modified and tested through storytelling prototypes. The project proposed that different types of gardeners and the wider community groups need to be involved in the allotment garden movement in a different way. In addition, each group may be engaged in different stages according to their levels of support. Eventually, a design proposal of future allotment gardening was generated in the form of a strategic roadmap. The roadmap includes a five-step action plan which I defined as 1) Encountering 2) Inspiring 3) Sharing 4) Gathering and 5) Blooming, with detailed concepts for implementation.

Keywords allotment gardening, wider community, inclusivity, collaborative design, strategic design

Xinyue Du

Being Together, Growing Together,
Co-designing Future Allotment Gardens

Master Thesis

Major in Collaborative and Industrial Design
Minor in Industrial Design and Business Management

Supervisor & Advisor: Guy Julier

School of Arts, Design and Architecture
Aalto University
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“Today the primary reason is probably to have an urban place - close to home - where you can really feel being part of nature. A place where you can both feel and watch the changing of seasons. And a place where you have work enormously – using your own hands - during the growing season. If eradicating weeds doesn’t free you from (working) stress, sorrows or problems - then nothing does!”

*(The Federation of Finnish
Allotment Gardens, 2018)*

I want to express my great thanks to all persons who had helped me along this journey. It would not have been possible without all of you.

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January 2019

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The master thesis aims to apply tools and methods of co-design to explore a sustainable future of allotment gardening. A sustainable allotment garden involves the wider community in gardening activities by innovating a new model to achieve inclusivity.

Allotment gardening brings various values to the city in many aspects including organic production, culture, history, social cohesion and wellbeing. However, allotment gardens are operated in an outdated way and gradually became isolated communities. In Helsinki, allotment gardening is getting popular among the young families but increasingly more expensive in the meanwhile. The wider community is not familiar with allotment gardening and has little interaction with the garden community. In order to develop in a sustainable way, many garden associations are aware of the importance of inclusivity and establish a closer connection with the neighborhoods. However, they are not clear about how to do it. This project is dedicated to creating a shared understanding between allotment gardeners and the wider community, and design a strategy for an inclusive allotment garden for the year of 2030.

The research process is also a test of co-design. The Change Theory by Kurt Lewin, consisting of his Field Theory, Group Dynamics and Action Plan, is used as a theoretical foundation for this research. Following this approach, multiple research methods, including site visiting, semi-structured interviews, survey and participant observation were utilized in different stages to comprehensively study different types of target groups to get insights on group behaviors and activities of gardeners and non-gardeners. Referring to the theories of Communities of Practice and Communities of Interests, a co-design workshop was designed to build mutual understanding and to co-envision a wider inclusive future. Concepts co-created by the participants were modified and tested through storytelling prototypes. The project proposed that different types of gardeners and the wider community groups need to be involved in the allotment garden movement in a different way. In addition, each group may be engaged in different stages according to their levels of support. Eventually, a design proposal of future allotment gardening was generated in the form of a strategic roadmap. The roadmap includes a five-step action plan which I defined as 1) Encountering 2) Inspiring 3) Sharing 4) Gathering and 5) Blooming, with detailed concepts for implementation.

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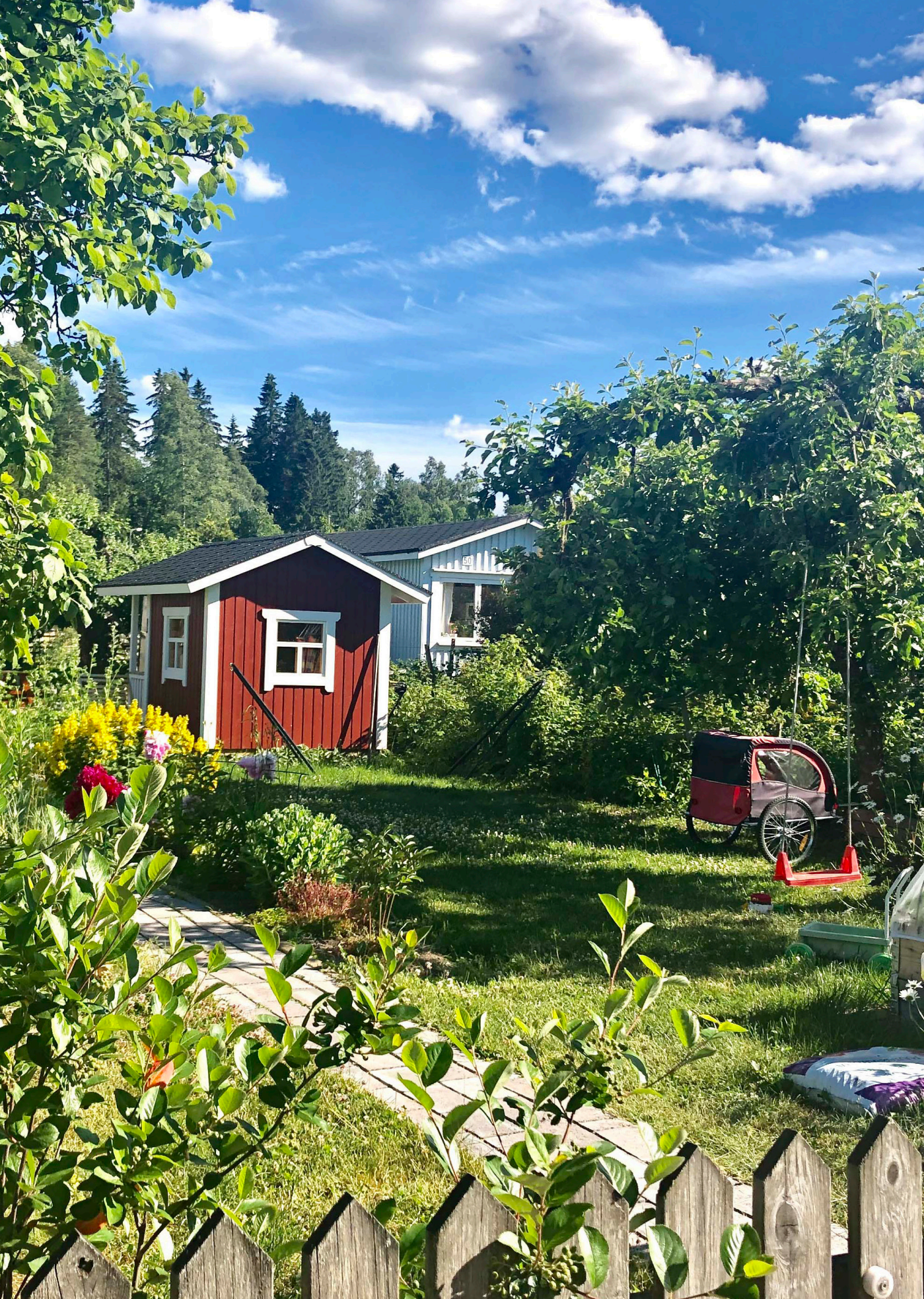
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01

Introduction

A garden dream in urban life

“The allotment gardeners do not garden in a vacuum. They influence the quality of life. They are part of society.”

(Weirich, 2017)

1. Introduction

In today's society, the pace of daily life is accelerating and the time we spend indoor is increasing. These might trigger people in seek of nature as a way to release stress and to get refreshments. The greenery in cities are not only beautifying the urban environment but more importantly, it also plays a significant role in buffering people's stressful life and health (Van den Berg et al., 2010). In Helsinki, green spaces embellish the city in many ways of urban gardening. For instance, public parks, guerrilla gardens, community gardens and allotment gardens. Those urban gardens, taking different responsibilities, make up an indispensable part of the city.

Even though allotment gardening is very common in European countries and started with the similar purpose of solving the problem of food shortage in urban areas, it nowadays became a rather localized and even isolated activity in Finland. Getting to know more about allotment gardens and getting along with those allotment gardeners, I am impressed to find out how valuable the allotment gardening is and how the gardeners appreciate that they have such a place in their life. Additionally, an allotment garden area is a place to enjoy nature for all people in the neighborhood. However, when people who do not have allotment gardens are asked about their impressions on allotment gardens, their comments are relatively negative since they consider allotment gardens as places for middle-class people and exclusive to outsiders. What leads to such a conflict between the allotment garden and the wider community? Is it a misunderstanding from both sides? From the perspectives of allotment gardens and the wider community, what are their expectations?

To figure out those questions, I started my journey with allotment gardening. In this journey, I explore the potential future of allotment gardening together with gardeners and non-gardeners by utilizing my skills in design collaboration. The two key points that frame the whole project are: 1) making an anticipatory design for the future allotment garden scenario and 2) studying the relationship of complex stakeholder assemblages.

The thesis aims to apply the tools and methods of co-design to explore an innovative future of allotment gardening by researching on practices of two types of urban gardening, allotment gardening and community gardening. There are two main parts of this project, learning to know and making it happens. To gain insights on allotment gardening, multiple research methods, including site visiting, interviews, survey and participant observation were utilized in different stages and with different types of target groups

during the research stage. To examine the practice of co-design, workshops and prototypes were conducted to generate and to modify concepts together with target groups. As it is a co-design project with participants, from planning to implementation, the progress direction is always adjusting along with the learnings I got and interactions I encountered with people.

To start with, the history of the development of urban gardening is examined to identify values from social and co-creational aspects from the characteristics of both allotment gardening and community gardening. In the meanwhile, a theoretical framework of allotment gardening values through the community of practices was developed with approaches of design collaboration. Given that urban gardening has been developed for a long time with enormous social reflections according to the cultural, historical and communal interrelations between gardening practices and the people engaged, the changing of social environment and mindset will make an impact on urban gardening practices. Therefore, allotment gardening, as a traditional gardening practice with a long history, also needs to adapt to the changing society. This problem is highly related to the shifting generation of potential users in the near future. Hence, the problem mapping of flexibility in typical allotment gardening practices will be spread around the engagement of people and the community it creates.

1.1 Research Questions, Methods and Structure

The objectives of the thesis are to explore a new strategy of allotment gardening practice in the future scenario 2030 and to build a new form of allotment gardening by engaging the locals through the method of co-design.

Research questions:

- 1) Which strategy should allotment garden adopt in 2030 when considering the need of a wider community?*
- 2) How can the practice of allotment gardening be changed through co-design to fit into the future?*

2030 is chosen to be the scenario because the lease of the land of the allotment gardens will be renewed in 2026. 2030 is roughly 10 years from now and there will be a generational shift in the owners of allotment gardens. Therefore, it is a good scenario to consider.

In this research, the change theory of Kurt Lewin, which contributes to building the research strategy in identifying target groups, structuring field research and executing design collaboration (Burnes, 2004), is used. To start with, a stakeholder map of allotment

gardening was generated to map out the target users engaged in the gardening practice so that the target groups of interviewees and respondents can be identified.

Interviews and site visits were conducted to gather information and insights and to dive deeper into the allotment garden community. Based on the initial stakeholder map, a survey on non-gardeners was distributed to the wider community to gather their opinions and impression on allotment gardening. In addition, participant observation in one community garden was conducted as learning in terms of the community building. Based on the abundant insights and findings from field research, a co-creation workshop was created to involve allotment gardeners and the wider community in envisioning the future allotment garden scenarios together. The design of the co-creation workshop used the theories of CoP, CoI and the three-step change theory as a theoretical foundation to test out the practicality in co-design. After analyzing the results from the workshop, valuable scenarios and concepts were selected for further development. When concepts had been modified elaborately into visualized materials, they were taken to prototype testing and evaluation. Based on the feedback and evaluation results, a design proposal of future allotment gardening was generated in the form of a strategic roadmap with a detailed action plan.

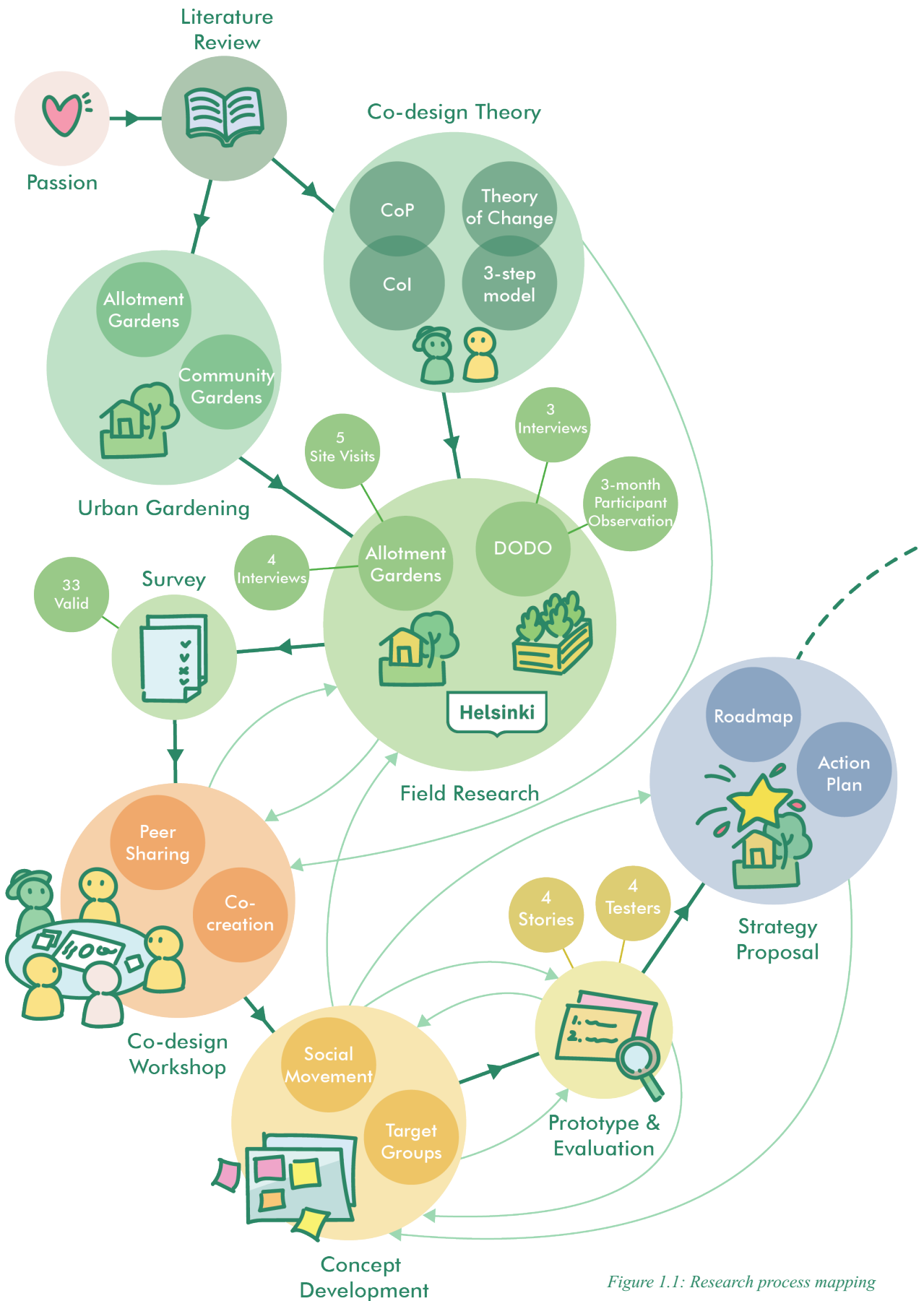


Figure 1.1: Research process mapping

1.2 Urban Gardening as a Lively Growing Practice

Allotment garden is a sub-group of urban gardening, which is defined as a practice that involves all kinds of gardening activities with a variety of plants in an urban environment (Ecolife, n.d.). It is therefore important and helpful to understand how urban gardening evolves since that allotment gardens also rise and fall with all other urban gardens.

Urban gardening takes a diversity of forms, varying from region to region, from generation to generation. It is a vital tradition with strong historical and cultural connections that are embedded in a region. According to the four major historical phases defined by Bell & Keshavaz, urban gardening has experienced its flourishing and sluggish periods but is undergoing a revival (2016). It is shown that the practice of urban gardening is becoming a popular trend in many European countries and the USA in recent years (Eidimtiene et al., 2016). In Helsinki, there are nine allotment gardens around the city in Marjaniemi, Ruskeasuono, Tali, Pakila, Klaukkalanpuisto, Herttoniemi, Kumpula, Vallila and Oulunkylä, forming lively communities. (The City of Helsinki, n.d.)

Urban gardening initially emerged in European countries when industrialization and urbanization took place. (Bell & Keshavaz, 2016; Eidimtiene et al., 2016). Given the difference in timing of development in different countries, urban gardening emerged earlier in some countries but later in others. The degree to which urban gardening was developed also depends on local industrialization and urbanization progress (Bell & Keshavaz, 2016). However, the purposes of urban gardening from its origins and early development among the European countries are similarly related to food supplement and urban environment (Bell & Keshavaz, 2016). Thus, urban gardening provided cities with agricultural and material services. However, urban gardening fulfills different functions today.

With increasing attention given to well-being and sustainable living, urban gardening is perceived as a practice with great potential in the socio-ecological aspect for individuals as well as for a community (Clavin, 2010; Weirich, 2017). As for an individual, one can benefit from urban gardening in social, recreational and psychological aspects (Eidimtiene et al., 2016). By taking the attributes of the collaboration in urban gardening, it can be developed as inclusive tools that bring significant values to public spaces, for instance, to enhance the building of community, integration of society and the innovation of recreation (Ernwein, 2014). The high practicality and the growing tendency in urban gardening make it a timely and interesting topic.

There are two typical types of urban gardening, namely allotment gardening and community gardening (Cabral et al., 2017). Allotment gardening is an individual or family-based practice that plants fruits or vegetables in small parcels or rented land for personal con-

sumption (Acton, 2011; Breuste & Artmann, 2014). While community gardening is a public activity that starts from grassroots with the idea of democracy (Ferris et al., 2001; Kurtz, 2001). In several aspects, they share common ground but are also distinct in other ways. Both of them are present in urban and suburban areas (Bell & Keshavaz, 2016; Ferris et al., 2001), and they share the agricultural function of growing fruits and vegetables (Acton, 2011; Breuste & Artmann, 2014; Ferris et al., 2001; Kurtz, 2001). However, they differ in their path of development and their attributes.

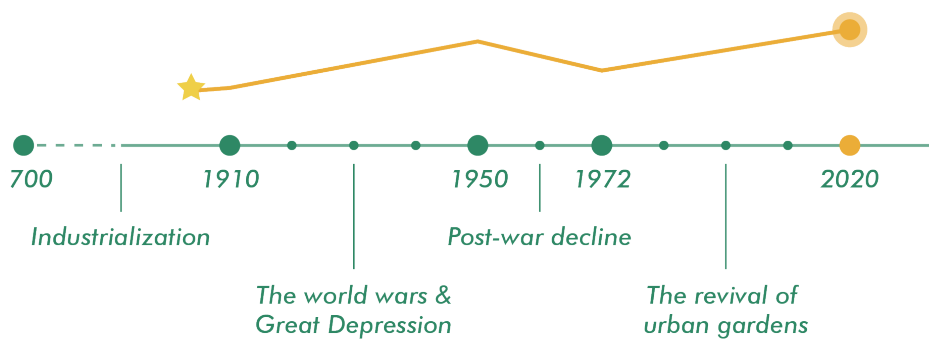


Figure 1.2: Timeline of urban gardening in Europe (Bell & Keshavaz, 2016)

According to an allotment gardening study, the increasing demand for allotment gardens has been reflected in the growing studies in the academic field (Ferres & Townshend, 2012). The study of Bell and Keshavaz (2016) provides a good starting point for further studies. However, due to the fact that allotment gardening evolution is intertwined with the regional economic development and influenced by social and political contexts (Bell & Keshavaz, 2016), a case study research on allotment gardening in Finland, and especially in Helsinki, is taken to further the understanding of allotment gardening in the Finnish context.

By reviewing the literature and conducting case studies, this thesis provides an in-depth, qualitative study of allotment gardening in the Helsinki region. And to the best knowledge of the author, this research is the first one to explore the inclusivity of allotment gardening.

Even though there are various definitions of allotment gardening, as specified by the Finnish official association of allotment gardening Suomen Siirtolapuutarhaliitto, or The Federation of Finnish Allotment Gardens, an allotment garden contains a plot with a

cottage (Suomen Siirtolapuutarhaliitto ry, 2018). This study will only focus on this type of allotment gardening. The history of Finnish allotment gardens can be traced back to the early 20th century. In Finland, a sparsely populated country with a large territory and high latitude, the development of urban gardening practices has its own characteristics (Suomen Siirtolapuutarhaliitto ry, 2018) and its own specialty relative to the culture of summer cottages (Carbaugh, 1996).

The Federation of Finnish Allotment Gardens is a non-profit allotment gardening association in Finland with 31 local associations running allotment gardens around the country (Suomen Siirtolapuutarhaliitto ry, 2018). As member associations of the Federation of Finnish Allotment Gardens, nine allotment gardens are spread in the Helsinki area (Suomen Siirtolapuutarhaliitto ry, n.d.) The allotment garden sites include public areas that are open to all during the summertime from 7 am to 9 pm and a private plot with the cottage for the allotment garden owners (City of Helsinki, 2018).

As mentioned above, community gardening is a public activity that originates from the grassroots with the idea of democracy (Ferris et al., 2001; Kurtz, 2001). The study on the community garden was largely conducted with DODO, an organization of community gardening with a strong impact on the Helsinki area (Dodo ry, n.d.). The young organization founded in 1995 consists of a group of gardening activists arranging innovative and collaborative works related to urban gardening with citizens (Dodo ry, n.d.). The organization, with a greenhouse site transformed from an old turntable near the Pasila train station in central Helsinki, arranges various gardening activities every summer (Dodo ry, n.d.). During the past 24 years, they have launched several community garden initiatives in Helsinki and extended the collaboration to other cities in Finland (Kaupunkiviljely, 2014).

Community gardening is more flexible in types and diverse in social values comparing to allotment gardening (Bell & Keshavaz, 2016). Since community gardening is a variable based on the local needs with common goals of involving different actors in community building and social cohesion, praxis and experimentation would be the main methods to collect insights in such bottom-up gardening practice (Ferris et al., 2001; Bell & Keshavaz, 2016).

By observing the difference in the ways of operation between community gardening and allotment gardening, the research intends to devise a new model after which allotment gardening can improve its ways of operation.

1.3 Personal Background and Motivation

As a service designer, I am particularly interested in the processes of collaboration and participation. From projects I have done previously, I have acquired an understanding of the significance of empathy and the value of co-creation. I have been following issues of urban gardening since 2018, when I did a strategic design project exploring the future of allotment gardening in Finland. By researching allotment garden development and conducting a case study in Talli Allotment Garden, I found it exciting and I committed to move the study further since it is valuable from many aspects like social, wellbeing and co-creation. A key finding from that project was the interesting conflicts between to keep and to change. As a traditional gardening activity, the allotment garden is still retaining a continuous local history and culture. However, with the generation shift, some fresh thoughts and changes are anticipated in the future.

During an interview, I met the board member of DODO organization and became involved in the practice of community gardening as a volunteer. By being involved in the community, I tried to find answers to questions related to “how the self-organized community is maintained” and “what brings people together”. After joining DODO, I met a lot of active members of different nationalities and from different cultural backgrounds. By sharing the passions for urban gardening and sustainable lifestyle, they gather together, planning to take their actions on urban gardening, such as urban dinners, turntable planting and seed swap. They are the grassroots activists volunteering on gardening activities.

Having been involved in both types of urban gardening activities, I started to compare the similarity and differences in allotment gardening and community gardening. It seems that the traditional allotments, with their internal community and a well-framed operational structure from the last century, lack some flexibility when the generation engaging in urban gardening shifts, and the ideas they hold change. However, community gardening, according to its attributes, is flexible and inclusive of the public. Comparing to allotment gardening, community gardening is a more inclusive practice that anyone interested in gardening can be part of. While allotment gardening, on the contrary, requires a large amount of monetary commitment that makes the practice inaccessible for many.

Starting from understanding *community*, I focus my thesis on allotment gardening and community gardening by taking part and immersing in their communities in order to find if the traditional allotment gardening can learn from the community gardening to adapt to the future trend of openness and inclusiveness.

1.4 Co-design and the Change Theory

The thesis project of urban gardening praxis utilizes an important concept by Wenger, the Community of Practices (2011). The idea of the community of practices is about people sharing the same concern or passion gather in a community in order to create a collective knowing and learning through shared practices (Wenger, 2011). In both community gardening and allotment gardening practices the three characteristics of community of practices are present: (1) the domain that all members hold the common interest of gardening activities; (2) the community that members engage in gardening, learn and interact with each other; and (3) the practice that they share collections of practice activities for the gardening and community. (Wenger, 2011) The praxis of allotment gardening development for the future by designing the community of practices would be an appropriate approach to envision the future.

Before conducting and testing the community of practices with gardening activities, the position of design, as well as the designer's role, needs to be identified clearly. In this project, participatory design and co-design are applied as practical research methods for the design collaboration. Since the definitions and characteristics of participatory design and co-design have the same root and many similarities, the project would take both methods but with different emphases in using them in the practical phase.

The thesis intends to make allotment gardens more open and inclusive, and to involve the wider community, which consists of the people from the surrounding neighborhood, people interested in urban gardening and potential allotment garden owners in the future, into the design process. Participatory design and Co-design are good methods to bring in ideas from different perspectives into consideration and the design process and therefore serve the research purpose well.

With the trend of the collaboration of design and social science, a new mindset of thinking, learning and working together with users, defined as participatory design, was built (Sanders, 2003). This method aims to raise the awareness of people's engagement and involve all stakeholders in a design process (Carroll & Rosson, 2007; Simonsen & Robertson, 2012). It is usually based on the ethnographic design research that creates a mutual understanding between designers and users or stakeholders (Schuler & Namioka, 1993).

Co-design, as a collaborative research method, is built on traditional participatory design (Schuler & Namioka, 1993; Zamenopoulos & Alexiou, 2018). Different from the participatory research with a focus on research, co-design aims at co-creation that involves users in participating in the design process (Schuler & Namioka, 1993; Steen, 2013). In terms of co-design and co-creation, they tend to be synonyms in many research papers due to

the indistinct definitions between each other. The interpretation of co-design also has two different scopes depending on if non-designers are involved in the design process (Sanders & Stappers, 2007). In this article, co-design is used as a collaborative method that includes designers and other relevant users or stakeholders to the process development.

The evolution from user-centered design to co-design in the academic research field is not only changing the mindset about people. More significantly, it triggers the shift of the designer's role, which is directly affecting the design practice (Sanders, 2003; Sanders & Stappers, 2007). The change brings more variety and extends the scope of design and people involved in the practice. It is a social rather than a cognitive process (Schön, 1988). With the interrelations and complexity in design problems, it is a trend to work in broader collaboration (Détienne, 2006).

Related to evolution, some challenges also occur for the design practice, especially for the role of a designer. As Sanders & Stappers state, people with a professional background, experiences or strong passion in a field, when involved in a design process, can be seen as a co-designer in the team (Sanders & Stappers, 2007; Visser et al., 2005). In this situation, designers, sometimes it could be also a researcher, may take the role of a facilitator in a co-design process, which brings a new task for them as how to properly co-design with people (Sanders & Stappers, 2007). To elaborate further on this project, it challenges the designer with how to balance the role of designers and other creative co-designers in social practices. In order to distinguish the balance, designers are required to grasp the big picture for facilitating within and along the collaborative process (Sanders & Stappers, 2007).

1.5 Structure of the Thesis

The thesis consists of eight chapters. Chapter 1 gives an introduction to the whole thesis structure and releases the research questions for the study. Chapter 2 elaborates literature reviews from two angles. One is the practical objective of allotment gardening in terms of history, values and current situation, and the comparative gardening type — community gardening. Another is the theoretical knowledge about co-design practice, including the framework of the change theory, and the theories of communities of practice and communities of interests. Chapter 3 reveals the case study strategy, which in correspondence with the change theory of Field Theory, Group Dynamics and Action Research as the methodology of this thesis. Precisely, a detailed plan on conducting different types of field research was conducted, followed by a co-creation workshop with different stakeholders and prototype testing with stakeholders. Chapter 4 describes the findings from the field research on allotment gardens and the wider community. Chapter 5 demonstrates the

co-creation workshop with allotment gardeners and the wider community following the process of how the workshop was designed, prepared, conducted and analyzed. Chapter 6 examines the selected valuable concepts that were created by the previous workshop participants in forms of prototype testing and evaluation forms. Chapter 7 summarizes the design proposal that elaborates modified concepts from the evaluation with the outcomes of an allotment garden movement strategy and the detailed action roadmap. Chapter 8 reflects on the research process and concludes with what further studies can be conducted in the future to complement the limitations of this research.



02

Backgrounds & Theoretical Framework

Building a test ground for co-design

*One cannot understand an organization without
trying to change it..."*

(Schein, 1966, p.64)

2. Backgrounds & Theoretical Framework

2.1 Development and Values of Allotment Gardening

The term “allotment” is originally from the British word, and it is not clearly defined in Europe (Bell & Keshavaz, 2016). According to the standard definition of allotment gardening, it is a plot of land used for a family or an individual to plant fruits or vegetables non-commercially as a way of recreation (Bell & Keshavaz, 2016). The gardening activity is usually managed by local authorities or associations by charging some fees from the gardeners (Bell & Keshavaz, 2016). Another definition used by researchers is a wider term that including allotments gardening and community gardening (Ferre & Townshend, 2012).

Allotment gardening is one type of urban gardening (Cabral et al., 2017). Urban gardening initially emerged in European countries when industrialization and urbanization took place. (Bell & Keshavaz, 2016; Eidimtiene et al., 2016). In the 19th century, urban gardening appeared as a solution for fresh food shortage during the transition of urban industrialism (Barthel et al., 2013). Economic depression and the two world wars came before and after that also triggered the practice of urban gardening (Bell & Keshavaz, 2016).

For many countries, in the allotment garden area, plots for cultivation are often private area. Only some common spaces like paths and lawns are open to the public (Colding, 2011). This is also true in the Finnish context. The garden as a whole is open to the public only when events are organized by the gardening community. For such reasons, allotment gardening is considered to be an internal community only accessible for gardening association members.

By reviewing the development of allotment garden history, we can see that allotment gardening is a container of regional culture and history. The main purpose of having an allotment garden has changed from mitigating food shortage to fulfilling recreational needs. Nevertheless, there is another interesting fact that the allotment garden communities in every European country shared a similar way of operation when they were established in the last century. As a traditional type of urban gardening, allotment gardening has experienced their ups and downs during the development, and according to one research, the revive of urban gardens since 1973 also had a profound impact on the growth of allotment gardens (Bell & Keshavaz, 2016). Another evidence from the academic literature is that

there are growing studies related to allotment gardening due to the increasing demand for allotment gardens (Ferres & Townshend, 2012).

2.1.1 Values of Allotment Gardening

According to the last section, allotment gardens are still in very high demand in many countries that the price of acquiring one allotment garden is increasing. Even in some countries, it is said that there are long waiting lists for many allotment gardens (Wood et al., 2016). In this context, it is important to find out what attracts people to have an allotment garden. In other words, what are the values that an allotment garden contains for the society today? To answer this question, I categorize the values of allotment gardens into five types of values.

Food

As mentioned above, the history of allotment gardening can be traced back to the 19th century for solving the problems of food shortage in cities due to the urban industrialization (Bell & Keshavaz, 2016). For instance, in the 19th century, Czechia started the allotment gardening in order to get affordable and healthy food to solve problems of hunger and unemployment caused by wars and the Great Depression (Bell & Keshavaz, 2016; Spilková & Vágner, 2016). Nowadays, even though food production is not the main function that allotment gardening provides in urban areas, it still plays an important role (Holmer and Drescher, 2005a).

Culture and Historical Value

Since that allotment garden can be of a long history, the allotment site can be seen as material culture heritage (Acton, 2011). In many European countries, allotment garden has shaped the cityscape as part of the society (Office International du Coin de Terre et des Jardins Familiaux, 2017). Also, in many Scandinavia countries, allotment gardens became popular as ‘second home’ (Crouch & Ward, 1988). Found in 1932, the Vallila Allotment Garden witnessed the history of the Great Depression. To memorize and explain the history, the association built a museum cottage that collects objects and plant useful and ornamental plants from the 1930s (Vallilan siirtolapuutarhayhdistys ry., n.d.). Recently in the UK, with the rising interests of allotment gardening, the origins and history have become a commodified value for some plot holders to increase attraction (Acton, L., 2011).

Nature Connection and Sustainability

Van den Berg et al. argued that in modern life, people are separated from nature due to urbanization and densification (2010). Others argued that people live without enough green space and tend to be more vulnerable to the negative impacts of stressful life (e.g. Kaplan

& Kaplan, 1989). Allotment gardening, as well as many other types of urban gardening, has significant meaning in building the bridge between humans and nature. By participating in green exercise activities on allotment garden sites, people can reduce stress and anxiety (Pretty et al., 2007; Wood et al., 2016). From a personal level, it is regarded as an inexpensive way to build the connection with nature and provide various health benefits physically and psychologically (Soga et al., 2017). Such a practice of recreation, food production, peer learning enables residents of the urban area to learn about nature experience and environmental behavior (Breuste & Artmann, 2014). From the urban development level, allotment gardens play an important role in urban greenery as they provide ecosystem services that integrate utility, social meaning and beauty (Breuste & Artmann, 2014). Allotment gardening can be utilized in peri-urban areas to rehabilitate abandoned agricultural land as well as engaging people in the natural setting for recreation and productive activities (Ricci & Conrad, 2018).

Self Development and Social Cohesion

Besides the tangible values of growing food, allotment gardening has many intangible social values (Acton, 2011). Allotment gardening, as a social practice, is an activity that promotes social interaction with family, friends and neighbors (Ferres & Townshend, 2010; Holmer and Drescher, 2005a). Many value the time for self and others in allotment garden activities as a way to develop social relationships (Ferres & Townshend, 2010). By involving in a gardening project, individuals or groups can benefit from recreational activities and networking (Acton, 2011). It is a good way to explore self-value and improve social integration via community building (Acton, 2011). Allotment gardening can also improve social integration. When sharing knowledge of vegetable cultivation or exchanging extra harvest, people interact with others and build a cohesive community in allotment gardening practices (Soga et al., 2017).

Wellbeing

It is estimated that by the year 2050, due to the growing urbanized population, up to 80% of citizens will live in urban areas (Cabezas et al., 2016). With the rapidly growing population, public health and well-being in cities are becoming the main challenge (Soga et al., 2017). Allotment gardening has great health benefits since it can significantly improve one's self-esteem and mood (Wood et al., 2016). One research about the allotment gardening in Prague, Czechia points out recreational and psycho hygienic function as the vital contribution of allotment garden (Spilková & Vágner, 2016). Quantitative research on the allotment gardening in Tokyo provides evidence of health benefits compared to non-gardeners in terms of general health, subjective health complaints, mental health and social cohesion (Soga et al., 2017). Furthermore, one comprehensive long-term research about the values of allotment garden activities in the UK found a linkage between allotment gardening and human health into four aspects: improving air quality and mental

health, encourage physical activity, enhancing social contact and social capital (Ferres & Townshend, 2012). The health benefits brought by regular physical activity are both physical and psychological (Pretty et al., 2007). Allotment gardening, as well as other types of gardening activities, is a good way to harvest benefits from both doing physical exercises and connecting to nature. It is also encouraged to make it a long term activity for mental well-being (Wood et al., 2016). In one research by Wood et al., there is evidence that even having the allotment gardening activities for less than half an hour can bring obviously beneficial health effect (2016). In this case, allotment gardening can be a short and occasional activity that fits into people's daily or weekly routines (Wood et al., 2016).

2.1.2 Allotment Gardening in the Finnish Context

With the changing lifestyle of modern society and the increasing awareness of environmental and social issues, it is expected that allotment gardening will play a more important role in the cities around Europe (Breuste & Artmann, 2014). Allotment gardens as an important element in contemporary urban life, attract the attention of citizens. Hence, the desire to have an allotment garden is therefore increasing. (Breuste & Artmann, 2014). In many European countries, transitional allotment gardening is getting popular with increasing interest and even developing into new forms (Breuste & Artmann, 2014).

However, in many urban areas around the world, the number of allotment gardens is decreasing and the trend is predicted to continue (Spilková & Vágner, 2016). The rapidly increasing demands for residential and commercial land in urban development impose pressure on allotment gardening (Caputo, et al., 2016). Urban planners and city governments are not aware of the great potential in allotment gardens so that in urban green structures and general construction projects, allotment gardens usually make a concession to others (Breuste & Artmann, 2014). Usually, allotments are giving way to residential and commercial projects, transportation infrastructure and recreation sites. While in some areas, the land which allotment gardens previously occupied still remain vacant. (Spilková & Vágner, 2016)

Finland is one of the pioneers in the allotment garden movement that started the first allotment garden in the early 20th century (Bell & Keshavaz, 2016). As the most sparsely populated country in the European Union with a large territory and high latitude, the development of urban gardening practices has its own characteristics (Suomen Siirtolapuutarhaliitto ry, 2018). Finnish allotment gardens are very special since they have usually cottages included in the allotment parcels (Suomen Siirtolapuutarhaliitto ry, 2018). During the year 1916, the first allotment garden was established for middle-class

people and women's movement in Hatanpää, Tampere (Mäkelä, 2010b). Later in 1930, The Finnish Federation of Allotment Gardeners was established in Tampere (Bell & Keshavaz, 2016).

In Finland, a culture that similar to the allotment garden is the summer cottage. With a population of 5.5 million, there are approximately 503,000 summer cottages in Finland (Suomen Siirtolapuutarhaliitto ry, 2018). In Finnish culture, a summer cottage has not only been seen crucially as a second home for summer holidays (Julkunen & Kuusamo, 1991), but also a significant part of Finnish life and the national identity (Periäinen, 2006).

Comparing to a summer cottage, allotment gardening has its advantages of occupying less land and much closer distance to the city center according to the Federation report (Suomen Siirtolapuutarhaliitto ry, 2018). On average, the land area of an allotment garden is about 375 m², which is more than ten times smaller than a summer cottage which takes about 5000 m² (Suomen Siirtolapuutarhaliitto ry, 2018). Allotment gardens are usually located in or close to the urban area which takes in average 5.7 km from the allotment to the city center whilst the summer cottage is usually in the countryside with a distance of 91 km (Suomen Siirtolapuutarhaliitto ry, 2018). The fact that allotment gardens occupy a smaller piece of land and are closer to the urban area makes it more accessible for people who live in the city.

In Finland, the land of allotment gardens is rented from the municipality, and administered by the local associations (Suomen Siirtolapuutarhaliitto ry, 2018). To be able to rent the allotment site, one needs to be a member of the association (Suomen Siirtolapuutarhaliitto ry, 2018). The plot cannot be sublet and is only used for gardening (Suomen Siirtolapuutarhaliitto ry, 2018). What makes the allotment gardening in Finland special is that the plot contains an electrically equipped cottage that is owned by the gardener, which allows them to spend their summertime in the allotment garden (Suomen Siirtolapuutarhaliitto ry, 2018).

According to an email interview from the Finnish Federation of Allotment Gardens, values in allotment gardening are still attracting people since some municipalities without an allotment garden is interested in establishing new ones. "Allotment gardens have been a part of the Finnish society for more than 100 years. A long history is great and the future looks bright." Commented on the exception of the future allotment garden (AG 05, 2018). As for the operation structure, it was mentioned that the common way of 'working together' was not very popular since some gardeners would rather pay for the works than do it themselves (AG 05, 2018). Hence, an alternative way to do the compulsory works in allotment gardens can be devised to help the gardens with such need.

In the context of Helsinki, allotment gardens established in the last century have now gone through a change of generation. Will this change affect the operation of allotment gardens in the future? Who will be the target groups in the year 2030 and after? To find answers to those questions, an in-depth study on allotment gardening in Helsinki was to be carried out.

To conclude, allotment gardening in Helsinki provides an interesting case for study and a test ground for co-design. The above-mentioned values demonstrate the importance of allotment gardens as an indispensable part of the city of Helsinki and efforts to maintain these values and improve upon their current status are worthwhile. By making the allotment gardens more inclusive, the values can be magnified in that more people can benefit from these values.

2.2 Community Gardening in Comparison to Allotment Gardening

Having been involved in one community garden, I started to think about how does the volunteer-based garden community function and what brings people together in doing garden activities? Since that community gardening tends to have a younger age group compared to the allotment garden community. Taking community gardening as a comparison, some insights might inspire allotment gardening in adapting to a younger generation and a wider audience.

2.2.1 Introduction to Community Gardening

There have been increasingly new varieties of urban gardening forms such as community gardening, guerrilla gardening and neighborhood gardening in the past 50 years (Adams & Hardman, 2014). Community gardening is a public activity that starts from the grassroots with the idea of democracy (Ferris et al., 2001; Kurtz, 2001). It refers to those public green spaces managed by civil society groups in a collective way (Bendt et al., 2013). Community gardening provides opportunities for broader environmental learning because the gardening practice can be combined with social, political and economic practices (Bendt et al., 2013). The organization of a community garden is more about facilitating an urban gardening project and involving citizens in the community (Adams & Hardman, 2014).

In addition, community gardening, as one type of urban gardening, also provides people with the opportunity to reconnect with food, nature and community (Firth et al., 2011). From the ethnographic perspective, some studies are focusing on the gardener's motiva-

tions like the reason to come and stay in a community garden (Bhatti and Church, 2011). Community building, social cohesion, human well-being, empowerment are continual goals for community gardening (Sondermann et al., 2016). As a result, the social capital of community gardening can be summarized as enhancing the sense of community and belonging (Teig et al., 2009).

2.2.2 Comparing Community Gardening and Allotment Gardening

As an innovative type of urban gardening, community gardens show advantages on their communal inclusiveness and lower threshold in gardening. Understanding how community gardens are operated and comparing allotment gardening and community gardening might shed insights on allotment garden development from the aspect of community building and wider community activating. Having a loose and flexible community that gathers people based on interests and passions might enhance the sense of belongingness inside a garden community. In addition, sharing the workload and working together might provide a solution for the younger generation in terms of lacking time and experience.

Community gardening and allotment gardening, both as collective urban gardening practice organized in a common way, share many similarities with allotment gardening (Bendt et al., 2013). For instance, both of them are present in urban and suburban areas (Bell & Keshavaz, 2016; Ferris et al., 2001), and have the basic agricultural function of growing fruits and vegetables (Acton, 2011; Breuste & Artmann, 2014; Ferris et al., 2001; Kurtz, 2001).

Comparing the factors and values of these two types of urban gardening, what distinguishes community gardens from allotment gardens is their broader inclusiveness. (Bendt et al., 2013). Because of the fact that most of the allotment gardens originated during the 19th century and exist for more than one hundred years, compared to community gardens, they have more stable and long-term property rights (Colding, 2011). Relatively, allotment gardeners need to pay a small fee to become a member of the community which enables them rights in decision-making and to respect the rules and laws of the allotment garden (Breuste & Artmann, 2014).

As a bottom-up activity, community gardening is organized in a collective way by social or community groups (Ioannou et al., 2016). Civil society and the city work collaboratively on planning the urban green space (Bell & Keshavaz, 2016). Gardening community is heterogenous on age, gender, education and finance (Adams & Hardman, 2014). It is usually first occupying the land for gardening from brownfield or vacant plots with the

support from official administration later on (Ioannou et al., 2016). There is evidence indicating that people are more willing to start gardening practices from joining a community garden due to the limited amount of allotment garden spaces and a lack of confidence in planning and gardening (Holland, 2004; Milbourne, 2010; WRO 2012).

2.3 Co-designing Allotment Gardening Strategy

From the thorough analysis of allotment garden history, values and development and with some inspiration from the community gardening, a comprehensive understanding of allotment gardening is established. From the literature, research on allotment gardening mainly focuses on the huge benefits and various values it contains. Even though there are some potential conflicts on land utilization with residential or commercial buildings, they are not a problem in Finland.

Concerning what are the changes that an allotment garden needs and what is the suitable strategy for transition, we need to gather thoughts from allotment gardeners and stakeholders that are involved in this activity. Due to the fact that the scenario is proposed 10 years from now, comprehending the target groups is as important as designing a strategy for the movement.

The literature on design strategy is structured following the way of how the research is carried out. Since the aim of changing the allotment gardening strategy belongs to one type of organizational change. The Change Theory by Kurt Lewin was studied to construct a theoretical foundation for this research. According to the theory, the field that changes in behavior takes place is vital to study carefully in order to understand the processes of a group (Lewin, 1947a). To map out stakeholders and target groups, theories of communities of practice and communities of interest were utilized as a way to get information and classify different target groups. Above all, in order to implement theories of communities of practice and communities of interest into practice in allotment gardening content, co-design is the approach to build the connection between different communities and the movement strategy.

2.3.1 The Change Theory

One cannot understand an organization without trying to change it..." (Schein, 1966, p.64)

Before getting into co-design practice, it is necessary to take some time to think about the possible changes in allotment gardening from a strategic level. The values categorizing

and comparison between allotment gardens and community gardens have implied some potential opportunities and operational conflicts for allotment garden future development. Therefore, the strategy is mainly a social change that focuses on the organization and operation of the allotment garden community. When regarding the social change or social conflict, the Planned approach by Kurt Lewin is the theoretical foundation I refer to when designing the co-design strategy.

According to Lewin's work, there are four elements in the change theory, which are Field Theory, Group Dynamics, Action Research and 3-Step Model (Burnes, 2004). In this study, I utilize the first three theories of Lewin to construct the research framework and co-design strategy. In Field Theory, it is the group behavior that takes place in a field that reflects the changes in the group (Lewin, 1947a). Hence, through studying the field when allotment gardening occurs, factors that fermented changes in group behavior can be mapped out. The theory of Group Dynamics is supplementing the Field Theory in terms of the study objects. The focus of behavioral change should be put on the group rather than individuals (Lewin, 1947a). Additionally, it is not sufficient to promote change when only recognizing the dynamics without engaging the group in taking actions (Burnes, 2004). This led to the Action Research that the main idea is to reflect and evolve into the totality of the group situation (Burnes, 2004). Consequently, in order to be effective in change, the strategy of future allotment gardens should be structured as studying the field of gardening activities, identifying different target groups for understanding dynamics in a group level, and engaging participation and collaboration with different groups.

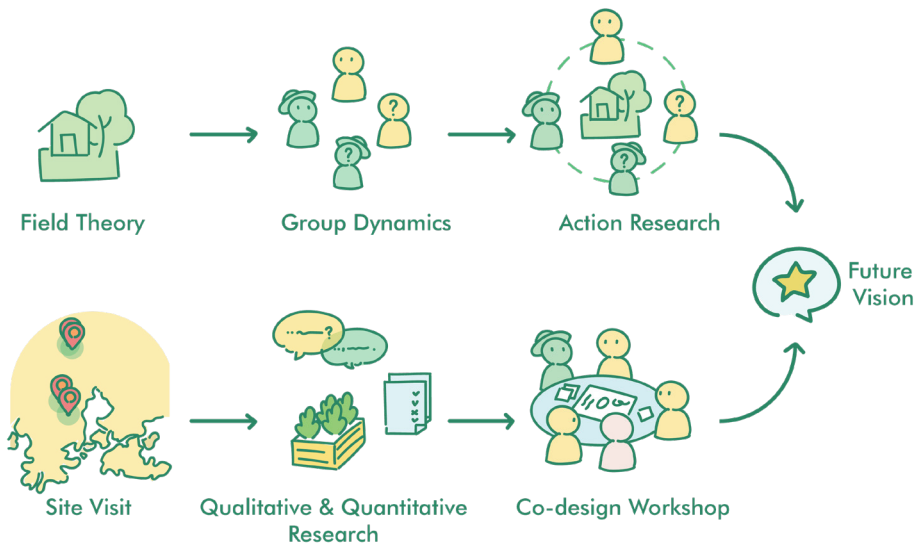


Figure 2.1: Theory of Change in research framework

According to Kurt Lewin, social change includes three steps: unfreezing, moving and refreezing (Lewin, 1947b). There is criticism that the change is complex and agile rather than linear (Dawson, 1994). Even though the three-step model is critiqued for being simplistic and outdated, as Kurt Lewin's most important contribution to the change theory, it was still enormous impacts on group behavior, involvement and empowerment (Burnes, 2004). Hence, in this project, I took the three-step model of Lewin as guidance and combined the comments from Dawson that social change should be done in a processual approach (Dawson, 1994). A new social change model that enables the nimble movement around different organizations or groups was created below (Figure 2.2). Following such logic, I mapped out the changing route of allotment garden movement based on the evaluated three-step model.

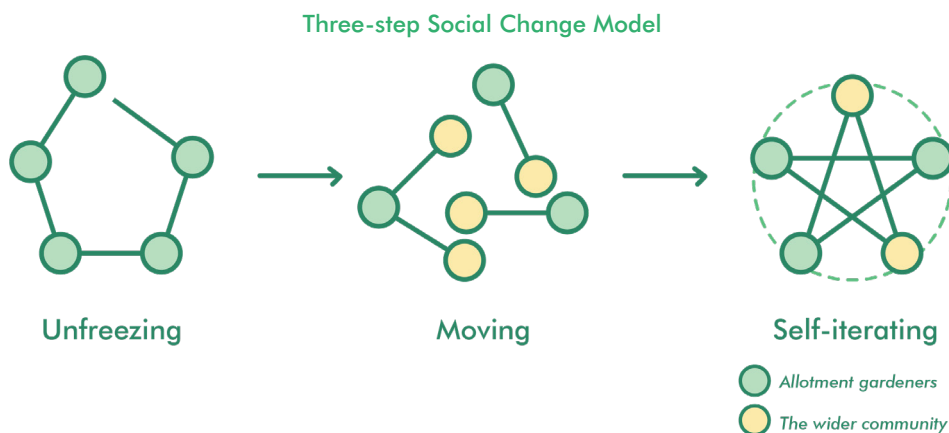


Figure 2.2: The innovated change model, by Lewin's 3-step model (Lewin, 1947b)

2.3.2 Communities of Practice

Communities of practice (CoP in short) was initially from the theory of situated learning that discussed the relationships between people, activities and the world (Lave & Wenger, 1991). The idea of CoP is about people sharing the same concern or passion gather in a community in order to create a collective knowing and learning through shared practices (Wenger, 2011). It is seen as a vital approach that growing numbers of people and organizations use to manage and improve their performance (Wenger, 2011).

There are three crucial characteristics of CoP according to Wenger's research, which demonstrates that both allotment gardening and community gardening may be considered within this concept (2011): first the domain that all members hold the common interest of gardening activities; second, the community that members engage in gardening, learn

and interact with each other; and third, the practice that they share collections of practice activities for the gardening and community (Wenger, 2011).

CoP enables negotiation, learning, meaning and identity for members in a community whilst practice is the key to maintain coherence in a community (Wenger, 1999). Through interaction, mutual engagement is created among the community members. The sense of joint enterprise will then be formulated based on that. Finally, the shared repertoire is conducted as communal resources. (Wenger, 2000).

In CoP, there is a conceptual gap within the domain that focuses on creating a sharing understanding between experts and novices (Fischer, 2004). Within the same domain, there is a discontinuity between participants and non-participants but related to the shared histories of learning (Wenger, 1999). Domain-oriented communities enable communication efficiency among members within their communities. However, it brings difficulties for communication and understanding for outsiders (Fischer, 2004). The boundary created within one domain group, when it is empowering the insiders, is at the same time building barriers for outsiders and newcomers to the group (Fischer, 2004). Therefore, CoP needs to be aware of the solidified inner community and established wisdom as well as to leave some space for renewing fresh thoughts (Fischer, 2004). Reviewing allotment gardening with the lens of CoP, it is not hard to understand why the inner garden community is getting more and more isolated. Experienced gardeners, especially those founding members, tend to be satisfied with their established tradition, which in a way created a wall to resist the fresh ideas from young gardeners who want to make some changes. Likewise, the whole allotment garden community, with their knowledge and involvement in garden communities, they might build a barrier to hear and to communicate with the wider community (Figure 2.3).

Communities of Practice in Allotment Gardening Context

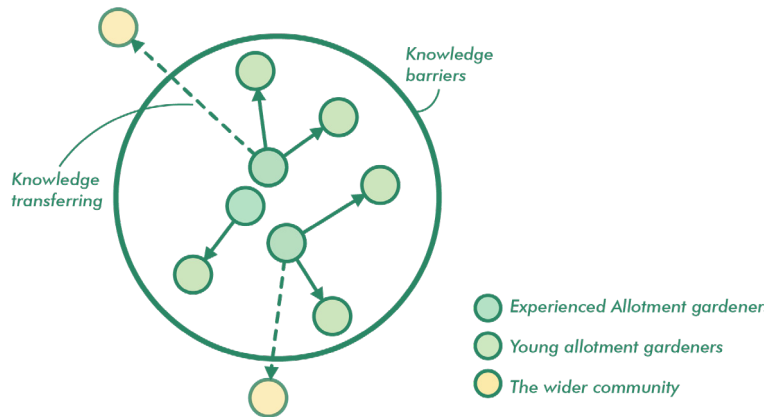


Figure 2.3: Theory from Communities of Practice, illustrated by the author

CoPs can be designed in various ways and activities such as creating an environment for learning and coordination or identifying gaps in associations (Wenger, 2011). The practice of allotment gardening development for the future by designing the CoP would be an appropriate approach to build a common understanding with the wider community. The CoP approach is ‘to analyze and facilitate knowledge transfer in a wide range of organizational environments’ (Roberts, 2006). It emphasizes on the social interaction of situated learning (Roberts, 2006).

2.3.3 Communities of Interest

Creativity comes from the interaction between one’s own thoughts and the socio-cultural context as well as the interaction and collaboration with others (Csikszentmihalyi, 1996; Engeström, 2001). The role of collaboration is getting important in design projects due to the fact that the expertise for solving one design problem is usually from more than one field (Fischer, 2004).

Solving complex design problems is usually a community action rather than an individual effort (Fischer, 2004). When facing complex issues, such as social issues, political issues, environmental issues and technology issues that involve knowledge and skills from multiple aspects, a different approach is required to engage relevant people to seek out solutions from their own perspectives (Zamenopoulos & Alexiou, 2018). There are four barriers when designer tries to involve people into communities, which are “ (1) spatial (across distance), (2) temporal (across time), (3) conceptual (across different communities of practice, and (4) technological (between persons and artifacts)” (Fischer, 2004).

Communities of Interest in Allotment Gardening Context

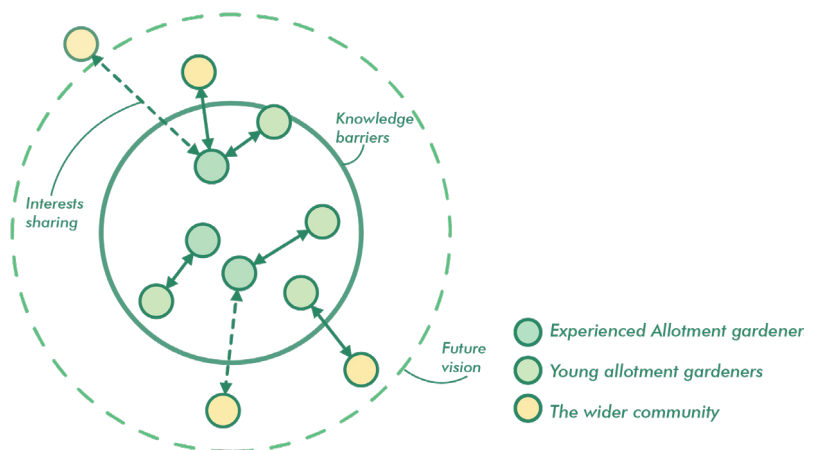


Figure 2.4: Theory from Communities of Interest, illustrated by the author

Communities of Interest, also known as CoI, is based on the shared interests for heterogeneous communities (Fischer, 2001). In other words, it can be understood as “a community of representatives of communities” (Fischer, 2001). Since people with the same interest are from different fields with a variety of expertise, building a shared understanding becomes the main challenge for CoI (Resnick et al., 1991). CoI is usually more temporary than CoP because the reason for different domains coming together is often to solve complex problems that cannot be tackled by one (Fischer, 2004). When different people or stakeholders are gathered together to solve a design problem with the same interest, they need to learn how to communicate and how to exchange knowledge in order to establish common ground (Engeström, 2001; Clark & Brennan, 1991). Designing the CoI would be an appropriate approach to envision the future allotment gardening with the wider community. With the same interests of gardening, allotment gardeners, when involving the wider community in co-creating ideas for an inclusive community, need to build a shared understanding as a bridge for envisioning the future allotment gardening (Figure 2.4).

Comparing CoP and CoI, CoP can be distinguished as “learning when the answer is known” whereas CoI is trying to find out the answer or new solution for a problem (Depaula & Fischer, 2004). People can have different roles and involve in more than one community, and for the community itself, being either CoP or CoI not constant (Fischer, 2004). More specifically, the community can contain characteristics of both CoP and CoI, and it is also possible to shift from time to time depending on the goal, structure of the community and outside context (Fischer, 2004). The practice and learning of CoP and CoI are explored and discussed in design communities. However, having shared understanding and knowledge exchanged does not necessarily limit in the design field.

2.3.4 Co-designing Allotment Gardening Future with CoP and CoI

In order to take the methods of CoP and CoI into design practice, a proper design method needs to be framed to execute allotment gardening future strategy. Co-design is a design practice where people share their knowledge, skills and resources to finish a task in a collaborative way (Zamenopoulos & Alexiou, 2018), can be utilized as the proper design approach for the praxis of CoP approach.

Co-design is commonly used in solving complex design issues involving different users or stakeholders. It is a broad topic with unclearly defined scope from different research articles. In one research, the historical roots of co-design are described as four traditions, including community design that emphasizes the collaborative work of community building; the socio-technical design that focuses on adversarial cooperation; co-creation that

connects users and designers and social design that aims at citizen-led social innovations (Zamenopoulos & Alexiou, 2018). Therefore, co-design can be utilized as a practical approach to bring diverse knowledge and skills together from various urban stakeholders (Baibarac & Petrescu, 2017), and in this research, it is used to bring the perspectives of different stakeholders together to reach a common understanding and to bring in ideas to facilitate innovation. For example, in urban development, it is imperative to engage multiple stakeholders in order to enhance urban resilience (Baibarac & Petrescu, 2017). Interaction and collaboration are the main way for individuals to stimulate intelligence and creativity in a social context (Csikszentmihalyi, 1996; Engeström, 2001).

The evolution from user-centered design to co-design in the academic research field is not only changing the mindset about people. More significantly, it triggers the shift of a designer's role, which is directly affecting the design practice (Sanders, 2003; Sanders & Stappers, 2007). In the article of Baibarac & Petrescu, the co-design methodology was framed to enhance the common urban resilience via involving potential users in the whole design process from defining, envisioning to prototyping and reflecting (2017). In the allotment garden context, co-design, as a practical approach to execute CoP and CoI theories. CoP can be applied when allotment gardeners transfer their knowledge about gardening activities to the novice gardeners and the wider community to allotment gardens. CoI can be applied when allotment gardeners and the wider community are brought together to envision a future that is more inclusive and sustainable.

2.4 Conclusion

In this chapter, it has been reviewed that urban gardening is now experiencing a revival so that allotment gardening is in the period of change to adapt to the future. Enormous values provided by allotment gardens including organic production, culture, history, social cohesion and wellbeing are still very valuable in both individual and social levels. Therefore, allotment gardening is getting popular in cities in which the price of getting one garden is rising. However, due to its private ownership of the cottage on the allotment, it gains some debates on whether allotment garden areas are occupying the land for other public buildings or residential buildings in some European countries. Fortunately, in Finland, allotment gardens are protected by the government through the Federation of Finnish Allotment Garden Association since allotment gardens share the responsibility of retaining nature and promoting sustainability in urban areas. Nevertheless, it is found that several allotment gardens in Helsinki areas are planning to involve a wider community in order to reach the symbiosis with the neighborhood for long-term development.

Seeing such opportunity, traditional allotment gardens need to find a way to engage the wider community for an inclusive future. Community gardens were studied as comparative material for the allotment garden to analyze community building and larger engagement. Through the literature, community gardens give inspirations to enable flexibility in gardening activity and the organization to reach out to the younger generation and active public groups.

Due to the fact that predicting the future strategy of allotment gardens belongs to one type of social change, the change theory by Kurt Lewin makes a good match for this project since the theory provides a systematic approach in promoting social and organizational changes. To be precise, Field Theory, Group Dynamic and Action Research are reviewed to be applied as a theoretical research strategy to investigate the allotment garden community and the wider community. In addition, the innovated three-step model was proposed to be utilized in processing the garden movement. The change theory also prepares the ground of the following methodology, which will be elaborated in the next chapter.

In order to practically reach the gardeners and the wider community and then envision the future allotment gardening together, with the change theory as a theoretical foundation, co-design was selected to be the method. To get the right target groups and to enable an efficient co-creation, Communities of Practice and Communities of Interest are the two theories applied in this research context for the purpose of identifying gaps between allotment gardeners and the wider community and building shared understanding on envisioning the future.



Methodology

Case study research as a strategy

“ ... there is hardly any limit on the empirical data used in case study research, the methods of analysing case study materials also vary considerably depending on the purpose and aims of the study and the more specific research questions. ”

(Eriksson & Kovalainen, 2008)

3. Methodology

Case study research, due to its feature of understanding and solving cases and the culture, history, society related to them, is frequently applied in complex issues (Eriksson & Kovalainen, 2008). In this thesis, a holistic and down-to-earth investigation is needed for allotment gardening activities and their relationship with the wider community. With such need, case study is selected to be a suitable methodology as it can explore detailed information from the participants' perspective with various sources of data (Tellis, 1997).

Seven semi-structured interviews were conducted with allotment gardeners and community gardeners, including four interviews with allotment gardeners and three interviews with community gardeners. Additionally, I conducted an interview with one officer in landscape planning from the City of Helsinki to collect information from the government side. As for allotment gardener cases, three of the interviewees are from Kumpula Allotment Garden, Vallila Allotment Garden and Klaukkalanpuisto Allotment Garden in the Helsinki area, respectively. The other interviewee is from Puolarmaari Allotment Garden in the Espoo area. As for community gardener cases, three interviews were conducted with members from DODO in Pasila Turntable Community Garden (Figure 3.1).



Figure 3.1: Map of interviews in Helsinki and Espoo areas

Interview questions and emphasis are designed differently for the two types of gardener case studies because values, motivations and attitudes are dissimilar. The emphasis of the interviews with allotment gardeners is placed on gathering information about allotment gardening values, current situation and development in Finland. While for community gardeners, understanding the motivation behind and how the community is maintained are the core issues.

As for the wider community, in this thesis, it refers to people who do not have their own allotment gardens. Since allotment garden is part of the city, it is important to engage the wider community and consider their opinions. For this group of people without a specific common attribute, an extensive survey was distributed to gather quantitative data about their awareness and acceptability in terms of allotment gardening. The survey was generated via Google form. Participants were gathered via street questionnaires and online social media. 34 responses are received, out of which 33 answers are valid.

After data collection, insights and initial ideas in forms of diagrams, photos and text are analyzed. Data from allotment gardeners, non-gardeners and the DODO community garden provided comprehensive and detailed practical knowledge for both allotment gardeners and the wider community.

From the data analysis, it was interesting to find that many among the allotment garden community do have the awareness of involving the wider neighborhood in order to be more inclusive in the future. However, the way of doing it was not clearly considered. From the perspective of the wider community, most people are interested but not so familiar with the allotment garden context.

With the two main findings, a co-creation workshop was planned and conducted to further discuss the allotment garden future with the wider community. Participants are invited to discuss and ideate together the future scenario of allotment gardening in 2030. Through poster making, persona creating and scenario building, common understanding of allotment gardening and its values were built among gardeners and the wider community. Furthermore, several concepts of the future allotment garden scenario were generated by participants.

Based on the discovery in the co-creation workshop, valuable concepts were developed further for the prototype making. The prototype was designed to be one of the modification section for the final concept. Allotment gardeners and targeted non-gardeners in the wider community were invited to test and evaluate the prototype.



04

Field Research

Gaining evidence in the field

“Any changes in behaviour stem from changes, be they small or large, in the forces within the field .”

(Lewin, 1947a)

4. Field Research

Following the research strategy, field research plays an important role in this thesis. In this chapter, field research and results were presented elaborately. As a researcher with very little experience in urban gardening, this stage provided me a good chance to learn by being engaged in their community, discover by communicating with gardeners and participating in their activities. Exploring the allotment garden inclusiveness, I see myself as one example of bridging allotment gardeners and the wider community.

Before conducting field research, I made a stakeholder map about allotment gardening to visualize the possible stakeholders and their relationships with allotment gardens. As shown in Figure 4.1, in this way, it is clear to prioritize who will be the focus for the field research and what aspects should be emphasized.

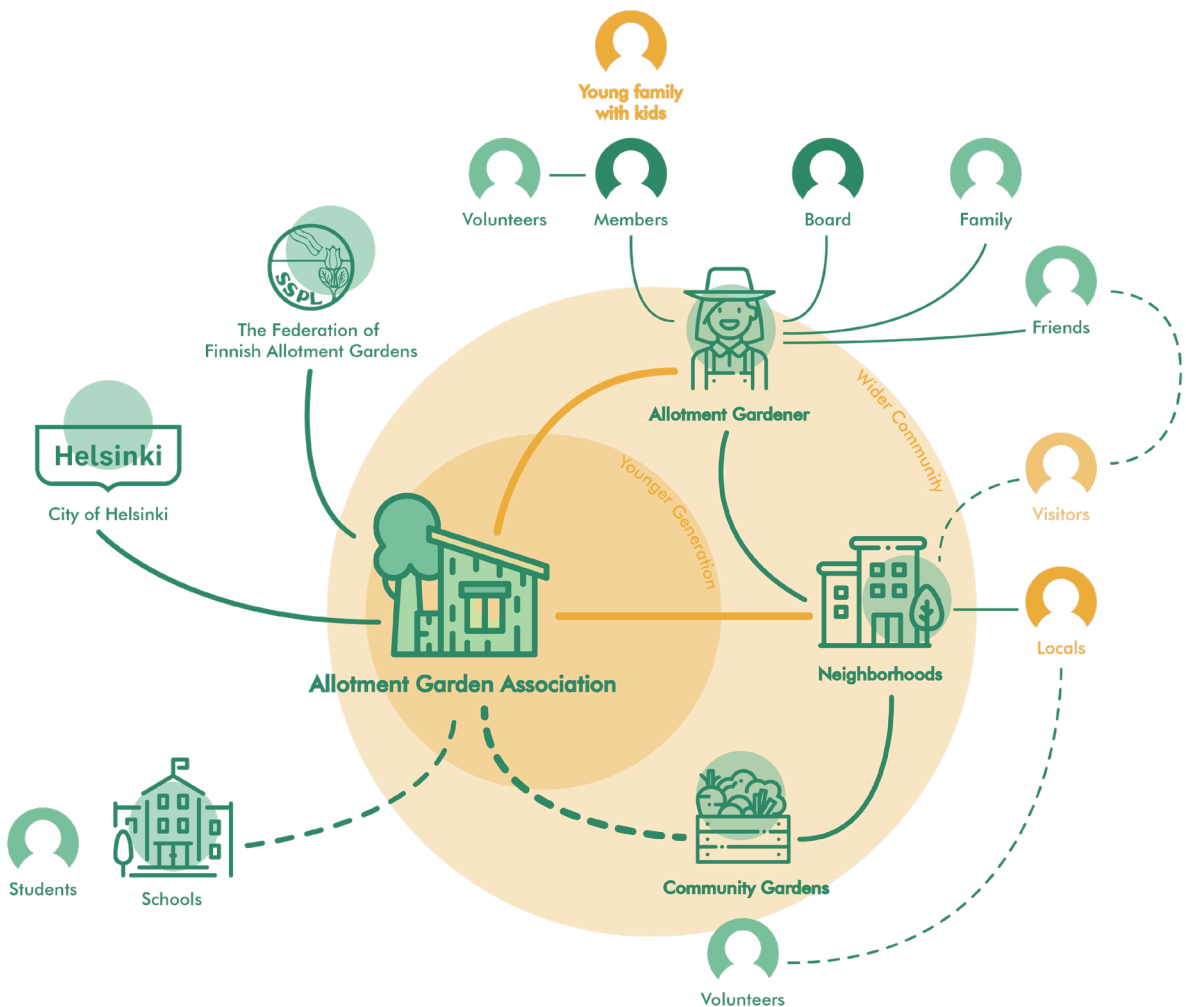


Figure 4.1: Stakeholder mapping of allotment gardening

4.1 Site Visits in Allotment Gardens

When conducting interviews with different allotment gardeners, I made site visits to those allotment gardens. Clubhouse with a big public space for events and activities were the basic settings for the garden community. Under the same umbrella of allotment gardening, every allotment garden has its own specialty during the development. Vallila and Kumpula allotment gardens are located in the central Helsinki with a very convenient location. However, when walking around the two areas, the busy urban life is disappeared and replacing with quiet and green nature. Both allotment gardens were established in the last century around 1930 with a strong historical style that remains on the layout of allotment garden areas and the design of every cottage. There are allotment garden museums open during summertime for the visitors to show the history and culture of the allotment garden.



Figure 4.2 : Clubroom and public square in Vallila Allotment Garden

Figure 4.3: Garden Cafe in Vallila Allotment Garden, open during weekdays

Figure 4.4: Notice board is a common way to deliver information in allotment garden communities

Pakila and Klaukkalanpuisto are the other two allotment gardens that I visited during interview periods. Unlike Vallila and Kumpula allotment gardens, these two allotment gardens do not fence allotment garden areas off the neighborhood. Residents and visitors can also freely visit and pass through these two allotment gardens. Pakila Allotment Garden, founded in 1948, is the largest one in the Helsinki area. Being affected by the



Figure 4.5: Organic food on sale every weekends during summer
Figure 4.6: Take a cup of coffee and enjoy a lovely afternoon at the garden

German-style, the layout of cottages displays blocks with similar sizes and straight pathways. Since the two allotment gardens are facing each other, their communities have close interactions as well.

When being shown around in allotment garden areas, I noticed that gardeners greet each other when meeting on the street. It was interesting to find that elder ladies seem to have more organized and well-designed gardens with lots of flowers compared to the younger family. There was evidence of many families with young kids. Interviewees also mentioned that they see more kids in the allotment garden nowadays than before.



Figure 4.7: Klaukkalanpuisto Allotment Garden, without gate and open to the public all year round

Figure 4.8: Vallila Allotment Garden, the gate is open only during summer

4.2 Interviews with Allotment Gardeners

Among the four allotment gardens, three of them were board members in their allotment garden associations for at least two years. Consequently, when conducting questions to ask, I made two sections that one about their own experience in gardening and another one focused on the current situation and operation of the garden community.

In order to get a more clear understanding of those insights gathered, I visualized the findings into one diagram to summarize the findings (Figure 4.9).

• *Gardeners and their gardens*

“I appreciate that this (allotment garden) is in part of the city services. ... It’s easily accessible and convenient compared to the ordinary summer cottage. (AG 02, 2019)”

According to the research, price and location are the two main reasons for gardeners to consider when buying their cottages. For the young gardeners, they would like to have the allotment garden close to their workplace or their apartment. Compared to a summer cottage, allotment gardens are easy to access. Especially, the allotment gardens in Kum-pula and Vallila located in a very good place with convenient transportation and natural environment. For all the interviewees, the allotment garden is a cozy and beautiful place for gardening and enjoy the fresh air and quiet in the city. According to the interviewees, there are many gardeners live here for the whole summer. It can be an alternative to the summer cottage but with a closer distance to the city center and convenient transportation.

• *Experience vs. Interests*

“It (gardening) is difficult in a way, but I also like it. I’m comfortable even though it might be a bit difficult. (AG 01, 2019)”

Among the younger gardener interviewees, all of them have little experience in gardening. However, it was very interesting to find that different gardeners have different interests in maintaining their gardens. One of the gardeners, started to learn gardening skills and knowledge from zero, spends a lot of time in learning via magazines, Facebook groups and some supportive courses. Another elder gardener who is very experienced in gardening said that gardening is a good hobby for her to keep moving every day. There is another young gardener who has no experience in gardening, taking the allotment garden as a place for community building. “For me, it’s the life, the people, and the community, and less about the carrots and whatever plants.” Said the interviewee (AG 03, 2019).

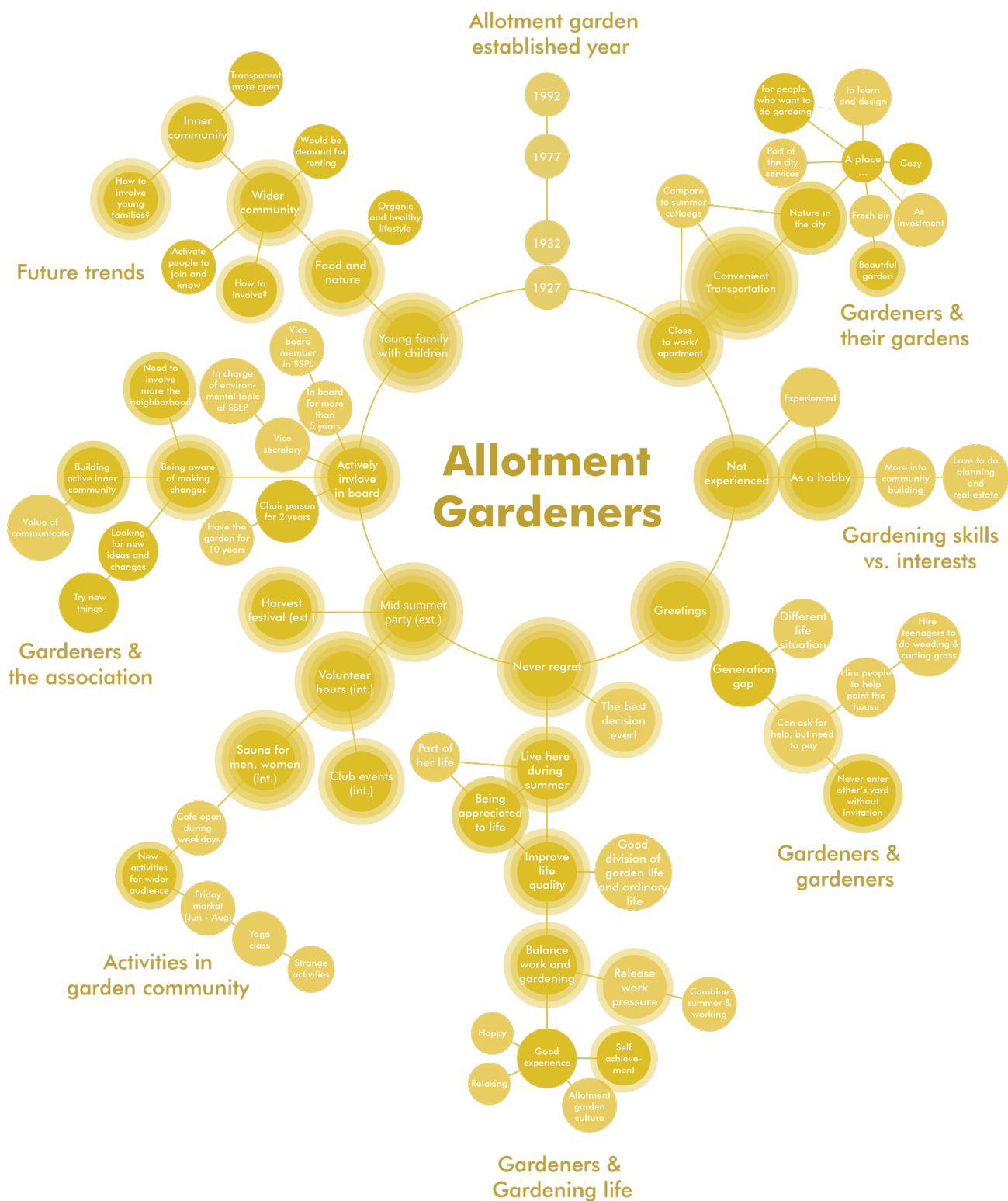


Figure 4.9: Map of interview results of allotment gardeners

• Gardeners and Gardeners

“you don’t enter other’s allotment garden without invitation. And if you want to be alone, no one disturbs you. (AG 02, 2019)”

When talking about the relationship with other gardeners, all of the interviewees said that they would greet when they meet each other in the garden area but have no further conversation. For the young gardeners, it might be the generation gap with the elders that makes them have less communication with other gardeners. One of the young gardeners said that it would be happy to have more neighbors to become friends with, but usually, gardeners here are in different life situations from hers. However, they mentioned that there were some people who just want to enjoy the privacy and silence in the allotment garden alone. Another interesting finding is that all of the interviewees talked about the situation of asking for help. The culture of helping each other is not popular now. “You can ask someone for help but you need to pay.” Gardeners sometimes hire teenagers to help to cut the grass and do painting work during the summertime.

• Gardeners and Gardening Life

“I love these people and I love this freedom and this air and everything that I just I had to have this to myself. And I was willing to do almost anything to get it even asked my parents! (AG 03, 2019)”

No matter what they value more in having their own allotment garden, when talking about their life in allotment gardens, I can see and feel how much they enjoy living there. For allotment gardeners, garden life is a good regulator for work and life, nature and urban. Among the interviewees, many said that allotment garden is part of their life. One of the gardeners mentioned that she learned to be appreciated to life. The life here simple and quiet, she can enjoy nature and do some reading while at home she has her own toilet, warm water and TV. The good division teaches her to be appreciated of what she has. Another gardener said that living in an allotment garden improves her life quality and release her stress at work. “Work is no longer my priority, and now I want to leave early from work and come here to take care of my garden.” Said the gardener (AG 01, 2019). From the interview with one of the gardeners who rent out her allotment garden on Airbnb, gardening life is attractive to not only visitors but also some locals for the experience of relaxing and being in the natural environment.

• Activities in Garden Community

“I don’t know if there are other ways to make more interactive activities with the neighborhood for anyone who is interested in nature, ecological way of growing food.”

All allotment garden communities have their own activities and events externally and internally. Commonly, every community has the harvest party and mid-summer party that open to the public. In some allotment gardens, there are flea markets or food selling markets on some specific days during summer. Internally, all allotment gardens have 10 hours’ volunteer work compulsory for all garden members to share works for public areas or event organizing. If members have no time for volunteer work, they have to pay for it. As for the internal activities, there are events such as an open garden day for gardeners. Usually, the sauna in allotment garden areas is for internal use. From their interviews, it seems that garden associations have the awareness of being more inclusive for the wider community, especially with the neighborhood areas. According to their words, the boards are planning to have more external events with the neighborhood. For instance, one gardener mentioned that the board was collecting ideas for new events and interesting activities that can be done with their neighbors to engage the neighborhood. Nevertheless, there might be more ideas about how to share it other than simply having more events. It is also worth the garden association thinking about how to engage the wider community and the younger generation.

• Gardeners and Garden Associations

“There would be ideas, but someone needs to make it happens.”

Three of the gardener interviewees are actively involved in the garden community and the allotment garden association. According to one chairperson of the garden association, she took the role because she is interested in building a good community and wanted to make some changes to the current garden association. She tries to open to new ideas and make the association more active. However, it was also mentioned in another gardener interviewee that due to the fact that the garden association was maintained by the gardeners in the community, everyone is contributing their own time to take the work voluntarily. If the association plan to try new ideas, they need people from the community to take them into action. “If you want to have something extra, you need to find committed people to do it.” Said one board member from the garden association.



Figure 4.10: Medals a gardener won in activities held by the garden community

• Future Trends

“History and today are great, but the allotment gardens and gardeners have to take care of the future as well... ” (AG 05, 2019)

When discussing future trends, the future of allotment gardeners is bright because more and more people are pursuing a sustainable and healthy lifestyle that an allotment garden can bring. Organic food and nature seem to get popular now and in the future. The interviewees are positive about the growing trend of the young family with kids having allotment gardens. However, they mentioned that the way of doing allotment gardening might be changed since the younger generation seems to have less time to be involved. Building a more active inner community and having more interaction with the wider community will be other key missions for the association. Consequently, it is time to come up with new ideas and new ways of operation for the garden community and with the young generation.

4.3 Interviews and Participant Observation in Community Gardens

Considering that community gardening is another type of urban gardening that contains similar gardening goals with drastically different ways of operation, I interviewed three community gardeners and conducted three-month participant observation in one community garden organization named DODO.



Figure 4.11: DODO Community Garden in Pasila old turntable

• Community and gardening

The main goals of interviewing community gardeners were to find out what motivates people to join and how the community is maintained. According to the interviews, there are three main findings in the community and gardening activities.

The first finding is the purpose of community gardening. Similar to allotment gardening, people choose community gardening because of its nature and sustainable values. For community gardens, the benefits are more about organic food production. People in community gardens can be connected through common causes such as doing something practical, interested in urban gardening, but there are also people who are interested in community building or learning community organizations. The second finding is about community building. Comparing to the allotment garden community, the community garden community does have an emphasis on inspiring larger participation and empowering bigger engagement for urban gardening. They are active in organizing events and activities that encourage people to join as a volunteer or just feel attracted about the activity. One of the interviewees said that it is worthy to see those people coming to the community and get inspired by what they are doing. The third findings, which might be the core factor to operate the community, is the peer sharing. The model of how a community garden functions are based on volunteer works. People come to the place, learning gardening skills by doing things together and sharing the responsibility of taking care of the garden.



Figure 4.12: DODO community garden (dodo_org, 2019)

On the one hand, involving in a community garden is very flexible on time and work. On the other hand, sharing knowledge and workload means that you don't need much experience in gardening or commitment to maintaining the garden. It might be those advantages of flexibility and low threshold that attracted more young generations in this community.

• The community in Community Garden

Since that the spirit of the community garden is to encourage participation and peer learning, joining the community as a volunteer was an easy and effective way to in-depth study the community.

As a grassroots NGO that established for solving environmental issues, DODO community garden has a very different way of maintaining the community than the allotment garden community. In the community, there are action groups taking care of four different topics in the community. The physical community garden in Pasila Turntable is like a place for trying new ideas and doing gardening work together. Compared to the allotment garden community, the community garden focus more on knowledge sharing and peer learning. Gardening is the media to connect people and cultivate actions on new ideas.

Dissimilar to traditional allotment gardens, volunteers make up a big part of the community garden community. People who are interested in urban gardening or sustainable development can join in and do something together. As probably the only international urban gardening organization in Helsinki, and the community has some cooperation with the school on sustainable development projects, DODO community attracts many foreigners and university students. As one of the interviews mentioned, it is a loose community that you can choose to involve more or not. New ideas and new participants are always welcome, and there are always new faces in new events or activities. Above all, the community of a community garden is more flexible and dynamic.

The way of doing gardening is another difference in the allotment garden community. Since that in the community garden, people don't have their own places, all works are done together with each other. There are usually some experienced gardeners teaching how to finish the tasks. However, people are always encouraged to come and try even with no experience as peer learning is one important part of the community.



Figure 4.13: The tiny house with green walls and green roof. Made by DODO members
Figure 4.14: Organic food making in the community



Figure 4.15: Learning about gardening knowledge by helping the gardener

4.4 Insights from the City of Helsinki

According to the interview from the government side, allotment garden associations have a high degree of autonomy, and the city is mainly responsible for maintenance in public areas. In terms of the lease, the lease will continue after the year 2026 with all allotment gardens. The adjustment of the new lease is to unify rules and legislations of different allotment garden associations on the same level. The way of operating allotment gardens will basically remain the same as it is now. It was also mentioned that due to the fact that allotment gardens areas belong to the city, the purpose is not to make profits. Besides, there might not be new allotment garden areas in ten years. The autonomy of garden associations leaves rooms for gardeners to change their communities by themselves, which means that for the garden associations, there are plenty of opportunities to innovate the current allotment gardens to enhance the inclusiveness with the wider community. Additionally, the unchanged policy of allotment garden operation after 2026 is a chance for me to propose a new strategy for allotment gardening in the year 2030 (CH, 2019).

4.5 Survey for Non-gardeners

For the group of non-gardeners, I decided to conduct questionnaires to collect data about their impression and connection to allotment garden activities. Although the number of samples is not large due to the limitation of time and access to relevant target groups, there are some interesting findings related to non-gardeners that could be taken into consideration.

Among the 33 valid surveys, more than half of the respondents are not Finnish residents. The main groups are students and employees aged from 18 to 35. About 80% of people don't have any kind of urban gardens, and there are more than half of the participants have no idea if there are allotment gardens close to where they live. Although there are 40% of the participants are somewhat familiar with allotment gardening, there are still 20% of people have no idea what is an allotment garden. This finding reveals that the current model in which allotment garden operates really does isolate the community from the wider public (SN).

About the questions of "how much would you love to experience allotment gardening?", nearly half of the respondents (43.3%) would love to experience and 23.3% of the respondents remain neutral. When it comes to "would you like to have your own allotment garden", the results show an increase in negative response which from 33.3% to 46.7%. Nonetheless, more than half of the respondents show a neutral to positive attitude (53.3%) (SN).

According to the result, even though many respondents are not familiar with allotment gardens, they are still interested in experiencing allotment gardening or owning their allotment garden. Nonetheless, lacking enough time and the high price are the biggest challenges for them to consider getting their own gardens. In addition, having little knowledge of gardening is another factor that discourages people from allotment gardening. It should be paid attention that some of the respondents mentioned that suitable community and long-term interests are also very important to consider. One respondent mentioned that he preferred to have it with his friends or family so that he would be less stressed about learning and maintaining everything by himself. Even though people are not so familiar with allotment gardens and have never been to any activities organized by an allotment garden community, they agreed that it is an important part of the city functions.

4.6 Summary

The results from the field research and questionnaire are illuminating and valuable. Allotment gardeners have a great passion for their gardens. No matter for growing food, having a natural place to stay, or being involved in the community, they enjoy the lifestyle that an allotment garden creates. The garden community, even though having some issues of being outdated and static, they are open for ideas and seeking for a new way to maintain the community with the increasing number of young gardeners. Community gardeners, eager to try out new things and to empower the public, demonstrate the possibility of a flexible community. The wider community, although not very familiar with allotment gardening, are aware of the significance of allotment garden for the city and very interested in experiencing gardening life. All pieces of the puzzle are brought together. The vision of future allotment gardens seems to be bright and exciting with all these diverse insights. Having the puzzle mapped in mind, it was time to envision the future together with allotment gardeners and the wider community. In the next chapter, we are moving on to the co-designing workshop, where the amazing ideas were generated.



05

Envisioning the Future Together

Co-designing future allotment garden in 2030

5. Envisioning the Future Together

This section documents a co-creation workshop as the stage of idea generation. From the previous section of case study research, results from interviews, surveys and observation reveal some misunderstanding between allotment gardeners and the wider public. There are great potentials of making it more acceptable and inclusive for the wider community, especially for the younger generation in the future. The co-creation workshop was organized on the 28th of July, 2019 in Central Library Oodi. The workshop lasted for approximately 2 hours. There were 8 participants in total. Three of them have their own allotment gardens, and the rest of them are non-gardeners. Participants are in different genders, age groups and countries with various backgrounds. Three design games were created to inspire co-creation between gardeners and non-gardeners. Co-design methods were applied in the workshop to facilitate communication and co-creation within mixed groups of allotment gardeners and non-gardeners.

5.1 Co-design & Design Games

When dealing with complex challenges, organizing collaboration is a way for designers to explore and envision future opportunities with non-designers in inspiring atmospheres (Sanders & Westerlund, 2011; Vaajakallio & Mattelmäki, 2014). In this research, envisioning an alternative future allotment garden is promoting a change in current associations and the society, which means that multiple stakeholders should be engaged to come up with solutions through the method of co-design. Referring to the theory of design games, in this co-design workshop, design games acted as a tool to engage multiple stakeholders for a shared understanding and empower participants to build a common language between designers and non-designers (Brandt & Messeter, 2004; Vaajakallio & Mattelmäki, 2014).

Keeping the theory of co-design in mind, while designing the workshop, I identified myself as the workshop facilitator that inspired participants to envision the future they would like to see. Because gardeners and non-gardeners with various backgrounds and knowledge of gardening were sitting together, coordinating the communication and prevent possible conflict was my responsibility to ensure the success of the co-design workshop. Practically, designing playful design games is a highly effective way to engage non-designer participants in active participation. Game sections I designed followed the bigger goals of first building common understanding and then co-designing the future with the shared understanding. The workshop games were also self-explained with abundant supportive materials so that data could be easily documented for further analysis.

5.2 Recruiting Gardeners and the Wider Community

In this workshop, participants should be recruited from the allotment garden community and the wider community. To ensure participant variety, different approaches should be utilized to reach different groups of people. Invitation letters were distributed in the forms of flyers and posters to online and offline target groups. In order to reach the younger generation, the main target group, digital invitation letters were sent out through WhatsApp and emails. In addition, several invitation letters were printed out and spread to Kumpula and Vallila allotment garden areas to reach the neighborhood. For allotment gardeners, about 50 flyers were put randomly to mailboxes of allotment gardens. Posters were placed in the gardening community notice boards.

As a bonus for attracting participants, I managed to get sponsorship from Design Museum with 15 free tickets. Considering that some families with kids might hesitate to come because of the kids, it was also mentioned in the invitation letter that participants were welcome to bring their kids. Some color papers were prepared for the workshop for kids to play with paper folding. Eventually, eight participants joined the workshop on Sunday. Among the participants were a couple of allotment gardeners who came with their two kids.

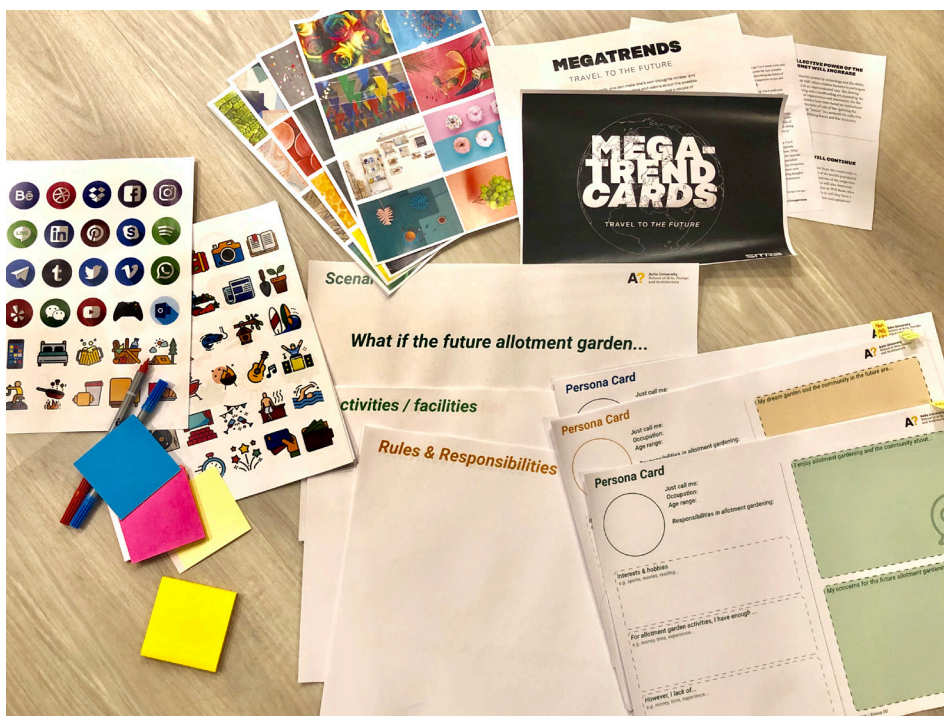


Figure 5.1: Preparing workshop materials

5.3 Workshop Design and Findings

According to the insights from data analysis, two aims of the workshop are defined as listed: 1) to build a common understanding of allotment gardening and its values; 2) to bring up ideas and options for envisioning allotment gardening in 10 years. To achieve the aims, there are two design games demonstrated with supportive design materials for participants to co-create with. When defining the aims and constructing the design games, communities of practice and communities of interests were applied respectively as theoretical support in terms of knowledge sharing and strategy making.

To start with, an introduction was presented to set up the topic, purpose and goals for today. Since there were participants with limited knowledge in the allotment garden, a short introduction with pictures as examples were displayed at the beginning. A warm-up session was followed to motivate participation. Besides a short introduction of themselves, participants were also asked to talk about their favorite fruits.

1) Peer Sharing of Allotment Garden Today

After the warm-up, the first section of the workshop is Peer Sharing of Allotment Garden Today. Participants were divided into two groups by mixing allotment gardeners and non-gardeners. The first task was to make a one-sentence definition of allotment garden activity with their group members. The purpose of mixing allotment gardeners and non-gardeners was to encourage peer sharing. Allotment gardeners with adequate knowledge and experience of the allotment garden could take the leading role in introducing the background and answering questions that the non-gardeners might have. Besides, non-gardeners could share what they heard of allotment garden so the gardeners were able to know what the wider community think of it.

After the discussion of allotment garden definition, the wider community had gain more understanding about allotment gardening, which enabled the second task, building on the common understanding. The task was to create a group poster about *Allotment garden impression of Today*. In this task, a template was given to both groups with some inspirational categories such as nature and sustainability, culture and history, and community. In order not to delimit the possibilities, one of the boxes in the template was named “others” for options that did not fit to the listed groups. To stimulate creativity and viewpoints, some pictures with various topics were prepared for this task. Participants could use pictures, elements, post-its and drawings to describe their impression of today’s allotment garden.



Figure 5.2: Co-design workshop in Oodi Central Library



Figure 5.3: Using inspirational pictures and post-it notes in poster making section

The poster making task provided a chance for both gardeners and the wider community to equally exchange their feelings, complement lacking the knowledge and diminish misunderstanding about allotment gardening with each other. After making the poster, a short discussion was arranged to share the results with the other group.

Group one defined allotment gardening as “an enjoyable green area for the gardener but also for the community.” They discussed the learning values of an allotment garden and mentioned that it can be a phenomenon-based education for kids. There were some rules of the current allotment garden like it cannot be subleased and the gardeners have to buy the cottage for renting the land. It reserved traditional techniques and plants. For the community aspects, allotment garden is a great place also for visitors to take a walk (CW 01).



Figure 5.4: Poster results sharing of group 1



Figure 5.5: Poster making in the workshop

The definition of allotment gardening in group two which focused on its function described it as “an area divided into plots for individual gardeners to grow their plants.” As for its nature and sustainability impression, allotment gardening provides organic food and adding urban biodiversity. It is convenient and medium-size gardening in the urban area. For individuals, abundant cultural activities are held in allotment gardens which enrich their lifestyle. In addition, taking care of the garden can be seen as a proper exercise for gardeners. For the community, allotment gardeners share food with the neighborhood, and common needs are taken care of by the gardening community internally (CW 02).



Figure 5.6: Poster results sharing of group 2

2) Co-creation of Allotment Garden Tomorrow

When enough understanding of the current situation in allotment gardening was achieved, it was time to co-create the future allotment garden. In the second section of the workshop, Co-creation of Allotment Garden Tomorrow, the first task was to create individual personas. Participants in this assignment were asked to complete the persona templates in a semi-anonymous way. Semi-anonymous, here means that names and profiles were supposed to be fake. Other information such as interests, wishes and concerns on persona boards should be filled with the real situation. After participants created the personas, they were able to take a 10-minute break. During the break, personas on the table were switched with the other one. When participants came back from the break, they would work for the idea generation with the new personas they got from the new perspectives. New groups were formed after the quick ideation. In the new groups, members should have similar ideas. Based on their shared ideas, each group would co-create future scenarios for new allotment gardens.

i. Semi-anonymous Persona Card

The task of making personas and switching with others was designed to create empathy for gardeners and the wider community. Participants making their own personas was a good approach to capture the real information and opinions related to the allotment garden future from participants' perspectives. In case that participants might not be willing to show their true thoughts, nicknames and symbolic profiles would eliminate such concerns. There are three types of personas with different questions boxes. For allotment gardeners, the persona template includes the questions "I enjoy allotment gardening and the community about..." and "My concerns for the future allotment gardening are...". For non-allotment gardeners, they are free to choose if they would like to imagine their future dream allotment garden and the challenges to achieve, or if the gardening context is not interesting, they can choose to describe the best Sunday and a bad Sunday for them as

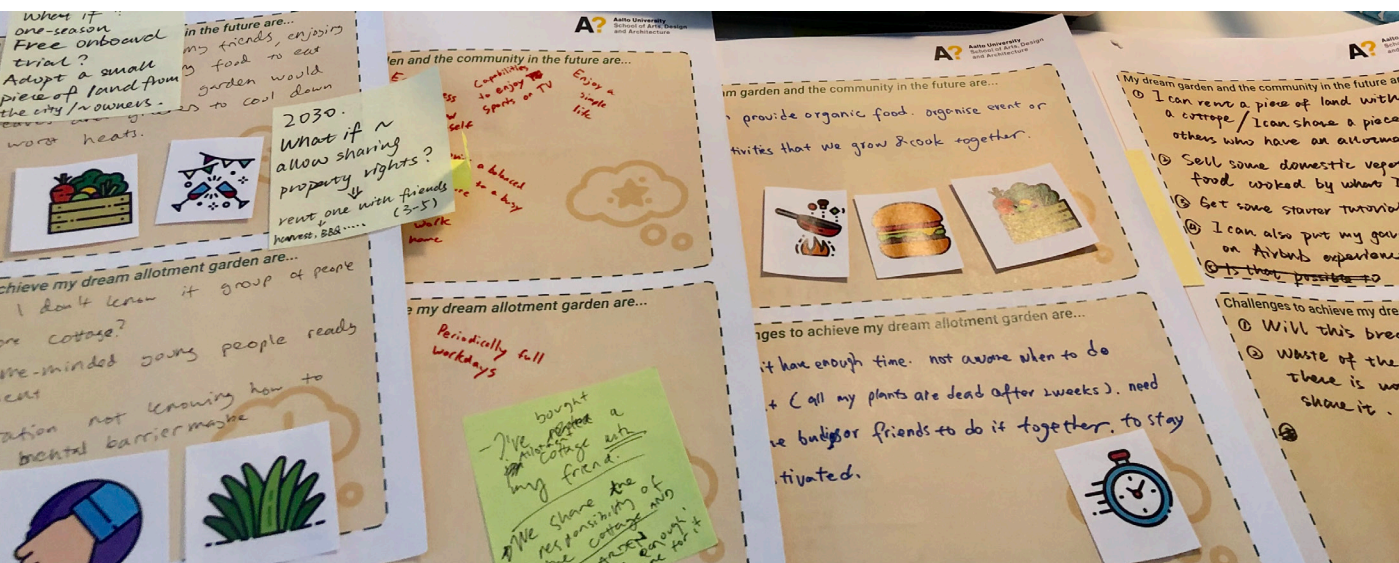
Figure 5.7: Persona card examples

alternatives. Some supportive images and icons were provided to help make the persona. A set of selected mega-trends cards from Siitra were also provided on the table for inspiration about the future trends (CW 03, CW 04, CW 05).

From the results of personas, three gardeners mentioned that seeing how the food grows and seeing the achievement of growing own food are very exciting. In addition, being outdoors, doing concrete stuff and having a beautiful environment are also enjoyable. For gardeners, they have enough financial ability to keep an allotment garden. Time and experience investing in gardening could always be more, but the motivation and passion for gardening could help with lacking experience. Comparing to a summer cottage, allotment gardens have the advantage of being in nature with convenient urban services. Regarding the future of allotment gardening, one of the concerns is that city expansion would challenge the situation of allotment gardens. Another concern is that the allotment garden movement needs to evolve with the changing society. For the younger gardeners, they are also worried about not having enough time to take care of it in the future (CW 03, CW04, CW 05).

For the wider community, the personas were mainly the younger generation ages from 20 to 30. Most of them have an interest in gardening or sustainable lifestyle. However, money and gardening experience for gardening are the main obstacles. Some of them also said that it might be hard to keep the motivation for a long time. When they were asked to imagine the dream allotment garden in the future, gardening and cooking together with friends, inviting friends to enjoy the garden were frequently mentioned. There were also some ideas from making it a business such as selling extra vegetables or some homemade food from the garden and making gardening as an experience on Airbnb. The challenges for achieving their dream allotment gardens are mainly from two parts. The rules for sharing an allotment garden and the mental barrier to start with limited gardening experience. The way of sharing the garden and how to find like-minded people were mentioned in one persona as well (CW 03, CW04, CW 05).

Figure 5.8: Results of persona cards



ii. Persona Cards Switching

After the break, participants got different personas created by others in the previous session. There are three reasons considered to switch the persona cards among gardeners and non-gardeners. Firstly, seeing the wishes and concerns of others would stimulate communication and mutual understanding. It triggers the empathy that we are doing it together and we are doing it for each other. Secondly, with the semi-anonymous card, people can be more relaxed and candid to imagine future scenarios from a new perspective based on their interpretation of the persona cards in their hands. Thirdly, it enhanced the fun of the design task which would inspire people's creativity in generating concepts.

iii. Quick Ideas and Scenario Making

With the new personas, the final session was to generate concepts of potential new models for allotment gardens in the future that could fulfill the needs of them. In order to relieve the atmosphere that might stress non-design people when dealing with design problems, participants were asked to start with a small exercise: quickly brain-storm ideas for your personas with post-its starting with “what if the future allotment garden ...” and share one of the best you like with others. The exercise was used as a way to find their partners for developing similar concepts in the scenario making task.

The scenario canvas consists of three parts. Participants were required to first write down concepts in the first part with the sentence of “What if the future allotment garden ...”. With the concepts, thinking about what could be the new activities or facilities for the new allotment garden. Furthermore, considering what could be the rules or who could be responsible for the new concepts. Many interesting ideas and valuable concepts were gathered in the scenario making session.



Group one created scenarios based on three non-allotment gardener personas. From their personas, there were some common wishes such as cook and eat with friends and share the property with friends with the same interest in gardening. The frequently mentioned challenges were rules of sharing allotment garden ownership, time and knowledge to maintain the garden (CW 03).

Hence, two scenario proposals formulated with the templates “What if the future allotment garden ... ” were:

1. It can be owned by a group of people.
2. It has flexible ownership such as rent or run as a “garden hotel”.

New activities or facilities could be added to support the new allotment garden are:

1. Online platform matching potential owners
2. Cottage only for renting
3. Starter tutorial

Rules and responsibilities to consider are:

- Registration with friends and strangers
- 2 to 4 gardeners or families
- Minimum 1 year and a maximum of 5 years if rent only
- “Garden Hotel” and a new business model for the shorter-term such as 3 days to one month.

Personas of group two were one young allotment gardeners and one young non-gardener. Getting inspiration from personas, personal achievement from growing your own food and limited time and money to take care of the garden were captured for scenario creating. With the template “What if the future allotment garden ... ”, the concept was “pick and eat” (CW 04).

1. Pick the food from the garden and pay the owner.
2. Eat the food that the owner has prepared from the food of the garden.

New activities or facilities could be added to support the new allotment garden are:

1. Pick and eat as a new business
2. Seasonal cafe
3. Cooking and sitting facilities
4. Virtual credit system including stamps

Rules and responsibilities to consider are:

- The allotment garden community will be responsible for the “pick and eat”
- Virtual credit system rules: work in the garden to get credits
- Schedule for the work needs to be strict

Personas in group three had a big difference with each other. There is one experienced gardener with enough time and great passion for gardening and the rest of two non-gardeners have fewer interests and experience in allotment gardening. For the gardener, she valued being in nature and making the garden beautiful. For one of the non-gardeners, he wishes that garden activities are not limited in summer. The other non-gardener takes the alternative persona which is not focusing on the allotment garden future. However, he mentioned that he likes video games and he could relax in any garden with good beers in a company with friends. Having those insights, two scenarios were created as listed (CW 05):

1. What if the future allotment garden is cubicle, portable and automated?
2. What if the future allotment garden is Airbnb for gardeners?

New activities or facilities could be added to support the new allotment garden are:

1. Portable plants, rolled grass and platforms for connection
2. Allotment garden to be rented
3. Airbnb style website

Rules and responsibilities to consider are:

- Instructions for gardening
- Feedback for users or tenants
- Change of community

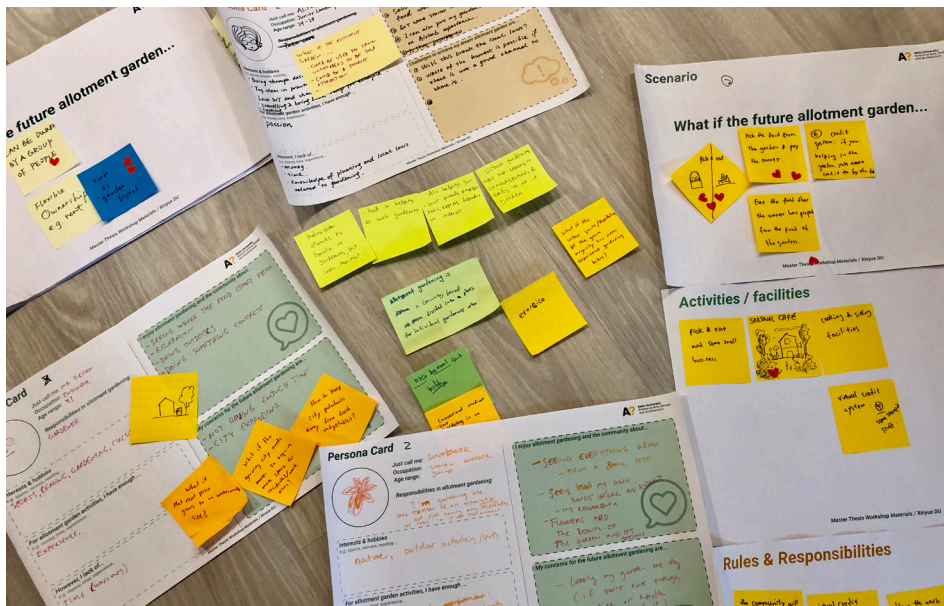


Figure 5.9: Analyzing workshop results

Figure 5.10:
Idea voting in the
workshop

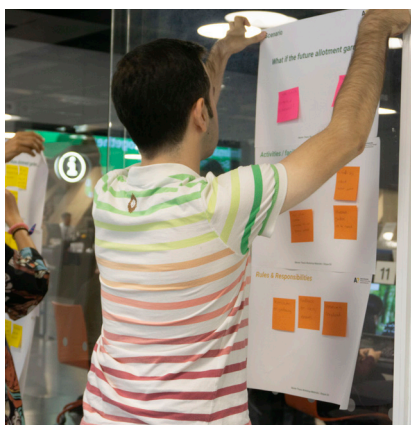
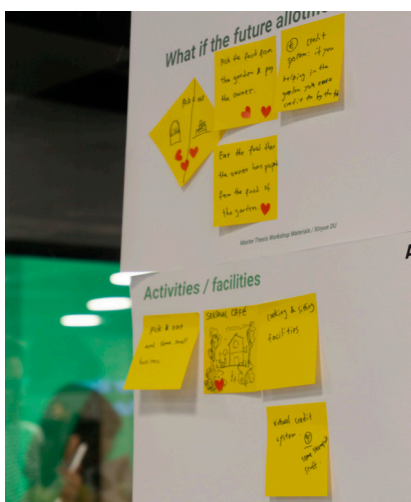


Figure 5.11:
Every participant
has three heart
stickers to vote
for ideas they
like the most



iv. Idea Voting

The last session of this workshop was idea voting. All of the group scenarios were put on the wall. Participants were encouraged to move around to see concepts and ideas generated by each other. Each participant got three stickers to vote for the best concepts or individual ideas he or she would like to see most in the future. Through this activity, participants could have an idea that what was commonly indicated and what might be the trend for the future allotment garden development.

To summarize, two of the groups had similar concepts related to the flexible ownership of allotment gardens. Renting allotment gardens as a ‘garden hotel’ gained three votes and having a model like Airbnb for gardeners gained two votes. Besides the renting concept, The concept of “pick and eat” which emphasized on knowledge sharing and gardening experiencing got also three votes. In this concept, participants like the idea of the virtual credit system most. There was one radical concept focusing on the flexibility of the garden itself that considered to make it modular and automated.



5.4 Summary and Limitations of the Workshop

In this workshop, the design games did a good job of bringing all participants together for co-creation. In the first section of peer sharing, it showed the allotment gardeners that there were many things that could be done to get the wider community to know more about allotment gardening and better understand the culture. The theory of CoP was verified in this section that the experienced groups, by sharing their knowledge with the ‘newcomers’, they broke the isolated barriers and included the wider community in their garden community. It opened the door for the garden associations to involve the wider community by knowledge transferring. In the section of co-creation, persona card making was tested to be a helpful tool to envision the future. Switching cards and making future scenarios from others’ perspectives nudged the mindset changing and empathetic thinking among gardeners and non-gardeners. Eventually, The scenarios generated by gardeners and non-gardeners were pointing to a shared and open future. This can be considered as a hint for garden associations in strategy making.

The co-creation workshop received many good feedbacks from the participants. Many valuable and insightful concepts were collected for in-depth development in the following section. However, there were some limitations to the study. In this workshop, none of the participants came from a community garden group.

From the perspective of a facilitator, there were some learnings from facilitating a co-creation workshop with designers versus non-designers, experienced gardeners versus inexperienced gardeners. For instance, the poster-making session worked well for both groups in building common understanding and encouraging peer sharing. Nevertheless, there are some limitations in interpretation. Even though it was supposed to be an individual work that ideas were shared with others and collected in groups, when sharing their own opinions, some people tended to get approval from others before putting the ideas on the poster. When discussing their impressions, participants had shared many ideas. However, it was not always written down on the poster. Additionally, sharing ideas of their own impressions might give pressure on people when it comes to something negative. From the mindset of a designer, it is natural to use various materials in interpretation. However, when it comes to non-designers, some implication or guidance is recommended. In this workshop, even though many inspirational images, abstract elements and mega-trend cards were provided as auxiliary for inspiration, some participants were more used to talk and write. Having one or two participants who used images and drawings and always writing down keywords of the discussion would help with such a situation.



Figure 5.12: During the workshop 01



Figure 5.13: During the workshop 02

Gardener & Living Life

a good way for people to experience the AG culture

happy & relaxing experience in cottage

part of her life

live alone, invite family and friends

live during summer time

Live here for the summer

Activism in Sustainable Way

Having events, seeing people coming, they get inspired

Want to know about Dads, community building

Inspire people, to teach people about Urban Gardening

community building

A Group of people doing things together

Learning to observe

Peer learning learn from each other

Share responsibility

Many volunteers doing/helping gardening works

Flexible role & work

AG Kind of people

Love dad / love dad, make sure of the city house

Future Trends

will be demand for moving

New ideas

higher connectivity in neighborhood

Temporary II new open

building inner community

growing people to get good house

Young family with children

Young Family with kids

Young family for staying, stay as long as possible

people generation to work after 5 days working hours

Cafe open during weekdays

Midsummer Party (external)

Stage activities

barbecue festival

Live zone (internal)

Mid-summer party (external)

Friday school (1-5pm)

Screen for Midsummer (internal)

Screen for Midsummer

Gardener & the Association

personally making a decision about the association

the AG is a support for the association

community is one of the support for the AG

the AG is a support for the association

living for the AG

the AG is a support for the association

community is one of the support for the AG

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06

Making the Stories Happen

*Concept development, prototype testing
and evaluation*

6. Making the Stories Happen

6.1 Concept Development

From the co-creation workshop, initial concepts that gained votes were selected to be further modified with elaborate plans and instructions. Among the developed concepts, scoring method was utilized to evaluate and filter those with higher overall ratings to conduct prototype testing and evaluation with gardeners and non-gardeners.

6.1.1 Target Groups

Identifying the main target groups are the starting point of directing a strategy (Abigail, 2015). In this project, envisioning the future allotment gardening can be seen as a social change that involves people in the urban area. Taking the Allies and Opponents Spectrum by Irwin and Faison as a reference, recognizing the allies and opponents is very important for the movement formulation (Irwin & Faison, 1979) (Figure 6.1). Regarding the allotment gardening movement, it is a safe and nonviolent action since there is no big conflict between the gardeners and non-gardener or internally in the allotment garden community. To narrow down the scope, I categorized five main target groups including gardeners and non-gardeners based on the research and workshop insights (Figure 6.2).

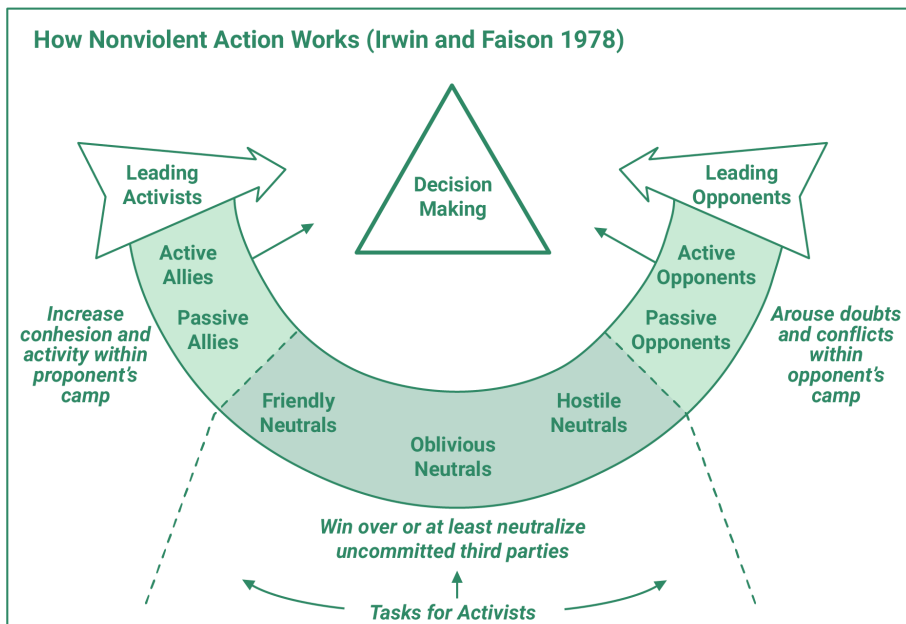


Figure 6.1: How Nonviolent Action Works (Irwin & Faison, 1978)

The theory is borrowed from Irwin and Faison (1978) and adapted to fit the context of the research.

Passive opponents - elder gardeners

From the previous interviews, it seemed that in terms of creating inclusiveness in the future, some of the elderly allotment gardeners were not very welcome about the changes. They are the first group of people when the allotment gardens were established. For this type of gardeners, they are the 'authority' group that might not take any actions but more likely insisting on the traditions way of doing it. Most of them have comprehensive knowledge and experiences since they witnessed the growth and development of the allotment garden practice.

When considering the gardening movement, the garden community should create a mutual understanding of the younger generation and the experienced elder gardeners. This group can be encouraged to share experienced knowledge regarding gardening development. They can be seen as the bond of inheriting the traditional culture and history to the younger generation.

Neutral - gardeners

In the allotment garden community, there are some people with less presence on most of the occasions. They are the silent group that only wants to enjoy privacy in the allotment garden. They might not care about what to be kept or what should be changed. Nevertheless, they might have some bold ideas in mind on the field that they are more interested in.

For this group of gardeners, appropriate guidance and inspiration could be helpful to trigger their engagement. For instance, some precise information about the allotment garden visions supported with visual materials can be easier for them to understand and discuss. They can choose their preferable topics to share some opinions and feedback.

Neutral - wider community

Having an allotment garden from a personal level can be for the reason of hobbies, improving one's life quality or live a sustainable life. According to the fact that allotment garden is a semi-private type of urban gardening, people with less knowledge or interests in gardening might have no idea about this context. They might agree with the urban function of gardening and nature from the city planning level, however, they are not familiar with the community and not rely on this one type of urban gardening.

The key to engage the neutral wider community is to provide information about allotment gardens and opportunities to experience the activities. For this group of people, seeing the tangible benefits are easier for them to give suggestions and be in the community.

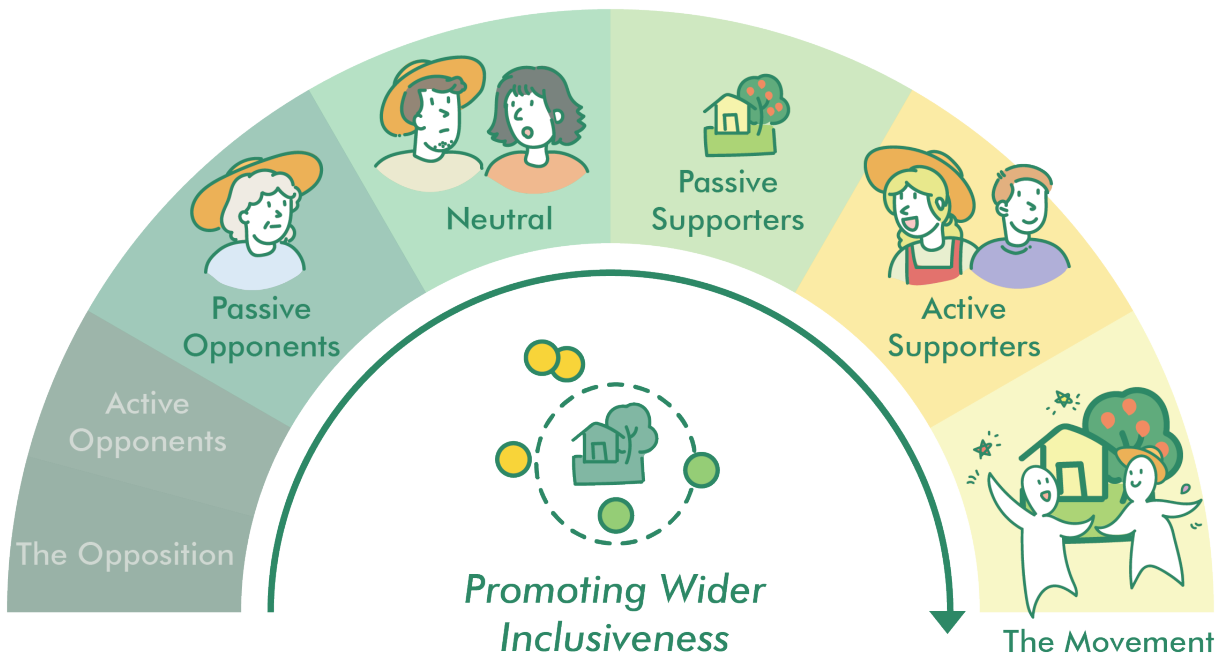


Figure 6.2: Spectrum for promoting wider inclusiveness

Passive supporters - garden associations

Having a big picture of allotment garden development within the city, gardening associations plays an important role in promoting changes in the future. According to the interviews with members from the allotment garden association, garden associations are conscious of the changes. Many of them pointed out that it is vital to involve the wider community especially the neighborhoods in their gardening activities. “Precisely we should include a wider community. Looking from history, allotment gardens have ups and downs. The only way (to involve the wider community) is to create legitimacy for the outsiders that people think it’s nice to have the allotment garden. So it’s essential to provide a good atmosphere to them,” said an allotment gardener from the garden association. Nevertheless, when discussing the concrete plans for involving the wider community, most of the gardeners admitted that they do not have a clear image of where to head either.

As for garden associations, they could take the role of a leader in the allotment garden community. They are the group of people who have the holistic strategy of movement in their hands and take the responsibility of supervision on each transitional checkpoint.

Active supporters - younger gardeners and the young wider community

Among the allotment gardeners, the amount of young families with kids shows an increasing trend in the near future. For this group of people, they are growing in a shared culture and an open environment. Although there seems no clear evidence if the younger generation is more inclusive or not, generally, they are aware of the changing environment and some of them are trying to take action in trying out new things in vitalizing the community. More likely they will react in promoting changes and innovation in their allotment garden community. For the wider community, the younger generation is also more acceptable to the culture of sharing compared to the last generation. Many of them are passionate to try new things and explore new ideas. However, from one of the interviews, it was mentioned that they tend to be not so willing to commit. Their passion and motivation grow and diminish very fast.

This group of people is the explorer in the allotment garden movement. They can provide fresh ideas and interesting perspectives when dealing with challenges. With the relatively open-minded, they are agile in promoting innovation. However, the active gardeners and non-gardeners might not have enough knowledge about the holistic strategy. Hence, the City of Helsinki or the garden associations can guide the innovation to specific aspects.

6.1.2 Initial Concepts and Innovation Framework

According to the action theory by Irwin and Faison, different groups have different strategies in a different stage of the movement (Irwin & Faison, 1979). Hence, when involving different groups in the gardening movement process, their strategy and action in triggering the changes should be tailored. To correlate with attribute differences, when proposing innovative strategy, the different intentions should be designed and implemented to different target groups considering their levels of acceptance and adaptation.

According to the research in chapter 4 and chapter 5, eight initial concepts were gathered and developed from field research and workshop insights. To interpret briefly, they are:

1. *Secret Box*: Make a small hut at the gate of the allotment garden so that gardeners can leave extra fruits and vegetables as gifts for the neighborhood residents or visitors. This concept came from one gardener that she doesn't want to communicate that much. But in such a way, she silently interacts with people she doesn't know.

2. *Allotment Garden Walk-through*: On a specific day, the garden community can design a route that goes through the whole allotment garden area. Gardeners decorate

the pathway together beforehand. On that day, people outside the garden community are invited to take a walk through the garden area. Some gardener-made “street food” is provided by gardeners for everyone to enjoy the beauty of gardens and food. I came up with this concept from an insight I got from one non-gardener. He lives near the allotment garden area but never enter the garden even though the public area is open during summertime. “There is only one gate in the allotment garden area. If I take a walk inside, I have to go back to the main gate.” Indeed, there is a common area open for the public in all allotment gardens. However, only keeping the main gate open might not really motivate the engagement of the wider community if it is not convenient for them in their daily life. Making such a special day could be a good way to encourage communication between the garden community and the neighborhood.

3. Allotment Garden Association Platform: In the future, there will be a platform-based garden association that could better maintain the garden community and enables lots of other activities and interactions with the wider community. Nowadays, all allotment garden associations have their webpages for public information and a private membership channel. Nevertheless, since there are many elder gardeners in the garden community, communications are mainly done in a physical way such as emails or newsletters. In the future when the younger generation would become the main group and development of digitalization, allotment garden operation can be done through a synchronized platform for all garden associations. This concept makes the technological base for the rest of the concepts in this project.

4. Rentable Garden Business: In the future, there will be short-term and long-term renting of allotment gardens. Short-term renting allotment gardens are provided for vacations and experiencing gardening life for visitors and locals. Long-term renting allotment gardens are designed as in-depth learning trials for people who consider buying their own gardens. Making allotment garden rentable is a good way to increase flexibility and expand the users to the wider community. Growing up in the culture of sharing, the younger generation present a higher acceptance of sharing. Rentable gardens were the mainstream of the allotment garden’s future vision on the co-creation workshop. Although there were concerns that allotment gardens were not meant to be profitable, the profit of renting allotment gardens could be mainly used for operating the garden association platform.

5. Sharing Ownership: In the future scenario, allotment gardens can be shared by two individuals or families in different ways. Through the garden platform, we provide a possibility of matching strangers as co-owners. They can decide how to share the allotment garden through an online contract. This concept got the inspiration from a neighbor of one gardener. There are people sharing the allotment garden now with friends private-

ly. However, will there be some needs for two strangers?

6. Badges-credits System: Through the garden platform, non-gardeners can look for volunteer works in individual allotment gardens to gain virtual badges for organic food, gardening experience or activities. This concept was design to promote the interaction between neighborhoods and the garden community. In this way, gardeners can save some time in doing volunteer works and additionally, they create opportunities of experiencing gardening works for non-gardeners.

7. Allotment Garden Pop-up Movement: this is a rather ideal concept designed for the later stage of the future vision. Allotment gardening can be seen as a new lifestyle for people in the city. Hence, the activity is no longer with a clear purpose or specifically for allotment gardeners. People could circle an empty space, build up a movable cottage, and organize whatever activities they like in the space to show their understanding of allotment garden life in forms of pop-up gardens.

8. Other breakthrough concepts that come from the movement: when the allotment garden movement is spread around the city, the wider inclusiveness of allotment gardening is created. When general people are familiar with allotment gardening and they all enjoy the sustainable and healthy lifestyle it proposed, allotment gardens are grown to be developed and updated together with the city and the changing generation.

In this study, I define the core concept of allotment gardening to be “a place for people to do gardening activities”. When regarding the relationship between people and allotment gardens, currently, an individual or a family has to buy the cottage on the plot to become an allotment gardener.

Borrowing from product innovation, I took the innovation framework as a foundational structure to interpret the innovation on allotment garden activity (Henderson & Clark, 1990). To make an analogy between core concepts and component relationships, I mapped the eight concepts into four types of innovation including incremental innovation, modular innovation, architectural innovation and radical innovation based on gardening functions and interaction between garden activities and target groups involved (Figure 6.3).

Gardening Activities Innovation Framework

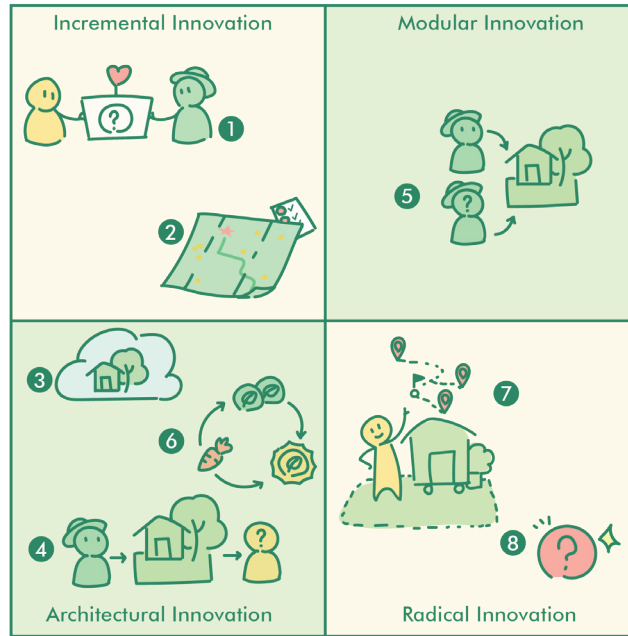


Figure 6.3: Innovation Framework (Henderson & Clark, 1990) , illustrated by the author

Since that concept 1 and concept 2 keep the same core concept of focusing on gardening activities and the same relationship of gardeners and non-gardeners, the innovation is incrementally adding more communication between garden communities and the neighborhood.

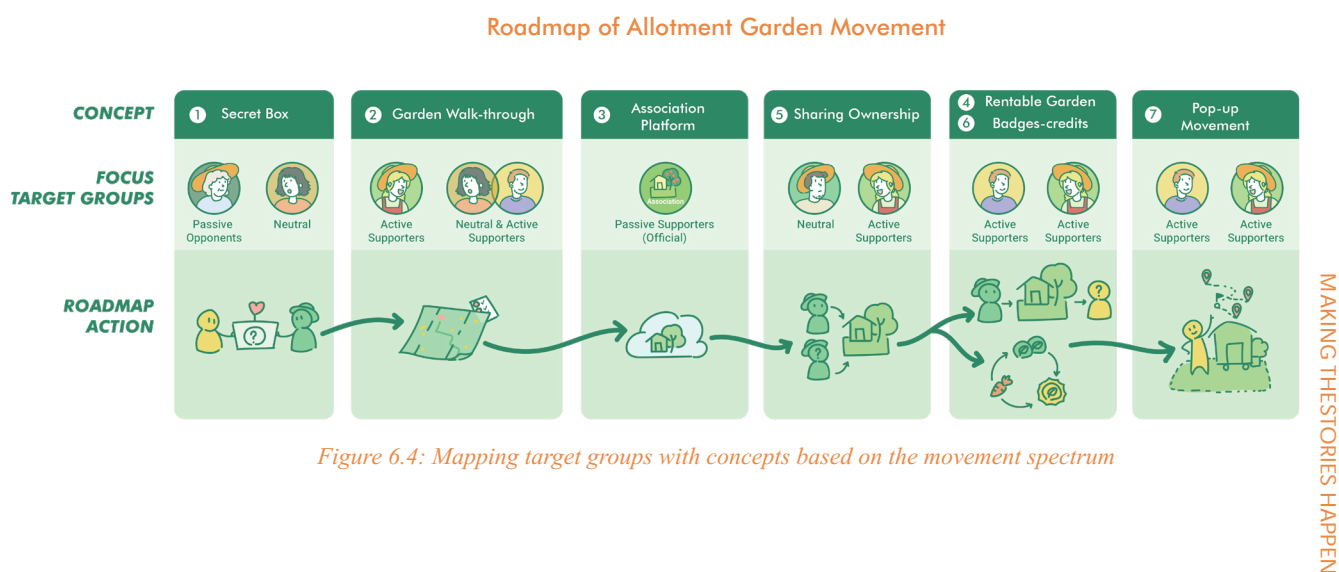
Concept 5 is defined as modular innovation because the sharing ownership enables several gardeners maintaining one allotment garden in a flexible way of co-operation.

Concepts 3, 4 and 6 are mapped in quadrant three Architectural Innovation. In the current situation, garden associations are made up of members in the garden community. Therefore, the association is more like a voluntary responsibility for all gardeners. In concept 3, operating the allotment garden platform requires a specific team to manage the workload. In concept 4 and concept 6, non-gardeners are involved in the garden community to become part of them (Involved as tenants or volunteers). These three concepts change the relationship between garden associations or non-gardeners and the gardeners while the core concept of doing gardening activities remains the same.

Concept 7 and concept 8 are visions of high flexibility and inclusiveness which I defined as radical innovation. For these two concepts, the garden community and the wider community are merged, activities are more than gardening based on the community.

6.1.3 Roadmap of the Allotment Garden Movement

When comparing the four different types of innovation, the intensity is dissimilar. The movement is not accomplished in an action. According to the movement spectrum in 6.1.1, levels of support from different target groups show correspondence to levels of change, based on which I sketched out the action roadmap to step by step reaching the allotment garden future vision. With the target group mapping and the innovation mapping, a roadmap of gardening movement strategy for the future 10 years are visualized below: (Figure 6.4)



6.2 Prototype Testing and Evaluation

In the previous section, the roadmap of allotment garden future vision was mapped out with the target groups. In accordance with the roadmap, there are plenty of concepts in every stage of innovation. However, due to the time-limited, I chose to in-depth work on the concepts with higher values for the prototype testing and evaluation. Concept scoring was the method I used for selecting appropriate concepts with carefully considered criteria.

Since this study is focusing on exploring innovative ideas for the future allotment garden, the level of innovation and the main target groups in future scenarios should be significant criteria. When testing concepts for future vision, it is also important to consider the feasibility of results in the current situation. To maximize efficiency, I took the accessibility and investment of preparing prototyping materials as two criteria to filter out concepts that require too much time and energy. As shown in the diagram, concept 3, 4, 5 and 6 were selected to carry out prototypes and evaluation (Figure 6.5).

Concept Scoring for Prototype Making

		Concept 1		Concept 2		Concept 3		Concept 4		Concept 5		Concept 6		Concept 7	
Success criteria	Weight	Rating	Score	Rating	Score	Rating	Score	Rating	Score	Rating	Score	Rating	Score	Rating	Score
Innovation	25%	2	0.5	2	0.5	4	1	3	0.75	3	0.75	4	1	5	1.25
Feasibility	20.0%	4	0.8	2	0.4	3	0.6	3	0.6	3	0.6	3	0.6	1	0.2
Importance of Target Groups	25%	2	0.5	2	0.5	4	1	4	1	3	0.75	4	1	4	1
Accessibility to Target Groups	15%	3	0.45	3	0.45	4	0.6	4	0.6	4	0.6	4	0.6	3	0.45
Preparation	15%	4	0.6	2	0.3	3	0.45	3	0.45	4	0.6	3	0.45	1	0.15
Sum of Score			2.85		2.15		3.65		3.4		3.3		3.65		3.05

Figure 6.5: The top four concepts were selected to make prototype testing

6.2.1 Preparation of the Prototype Testing

For the selected concepts to be prototyped, proper ways of prototyping concepts need to be designed. Since most of the concepts include a clear flow of the user journey, exhaustive storylines for new models were conducted for the most suitable target groups. In order to enhance the participation of the testers and increase the sense of immersion, there were some decisions designed for the testers to make based on the personas of themselves. Additionally, some preferences can be presented from the choices the testers made as data collected for analysis. After each model was presented, participants were asked to fill an evaluation form to collect quantitative feedback for the prototype.

As for recruiting participants, the testers invited were all from the previous workshop. Because of the time limitation, I didn't manage to gather all participants from the workshop in the prototype testing and evaluation section. In order to get in-depth and meticulous feedback, I chose to do the prototype testing in smaller groups. Eventually, I got 5 participants for the prototype and evaluation section. Among them, there were 3 participants from the wider community and 1 couple from the allotment gardener group.

6.2.2 Prototype Testing

With both gardener testers and the wider community testers, they need to go through the prototype of four models and fills evaluation forms for each of the models. It is vital to create a common understanding about the background knowledge of the four models and their relationships in the strategy. Consequently, a stakeholder mapping and a scale mapping was conducted to show at the beginning before the prototype testing section.

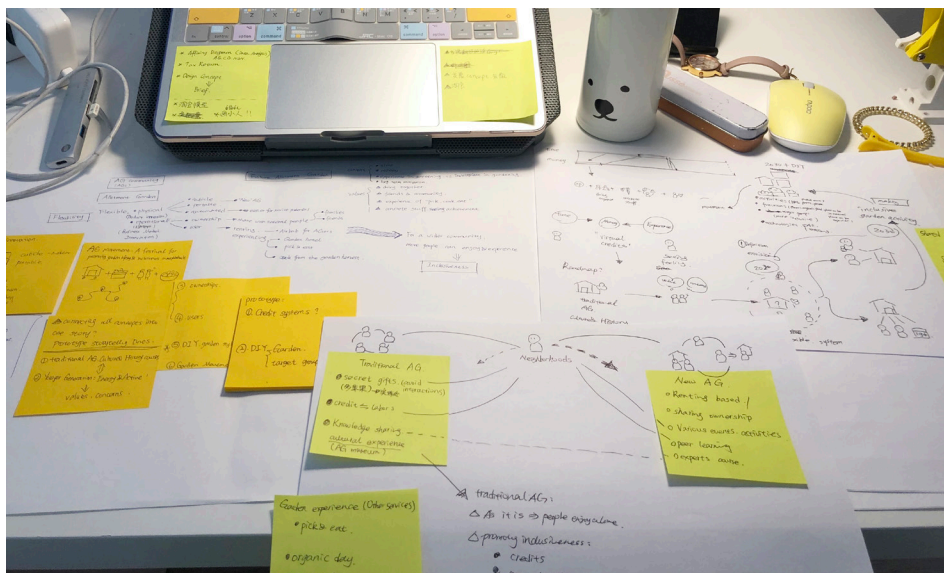


Figure 6.6: Designing storylines for prototyping

A. Stakeholder mapping

The stakeholder map was made to demonstrate the relationship of allotment garden association platform and the three types of allotment garden concepts which consist of shared ownership, rental allotment gardens and volunteer works. To simplify the flows among the stakeholders, models and the new garden association platform so that financial flows, functional flows and credit-badges flows can be clarified, in this map, stakeholders are generalized into three parts including allotment gardeners, local non-gardeners and tourist/migrants (Figure 6.7).

New Stakeholder Mapping

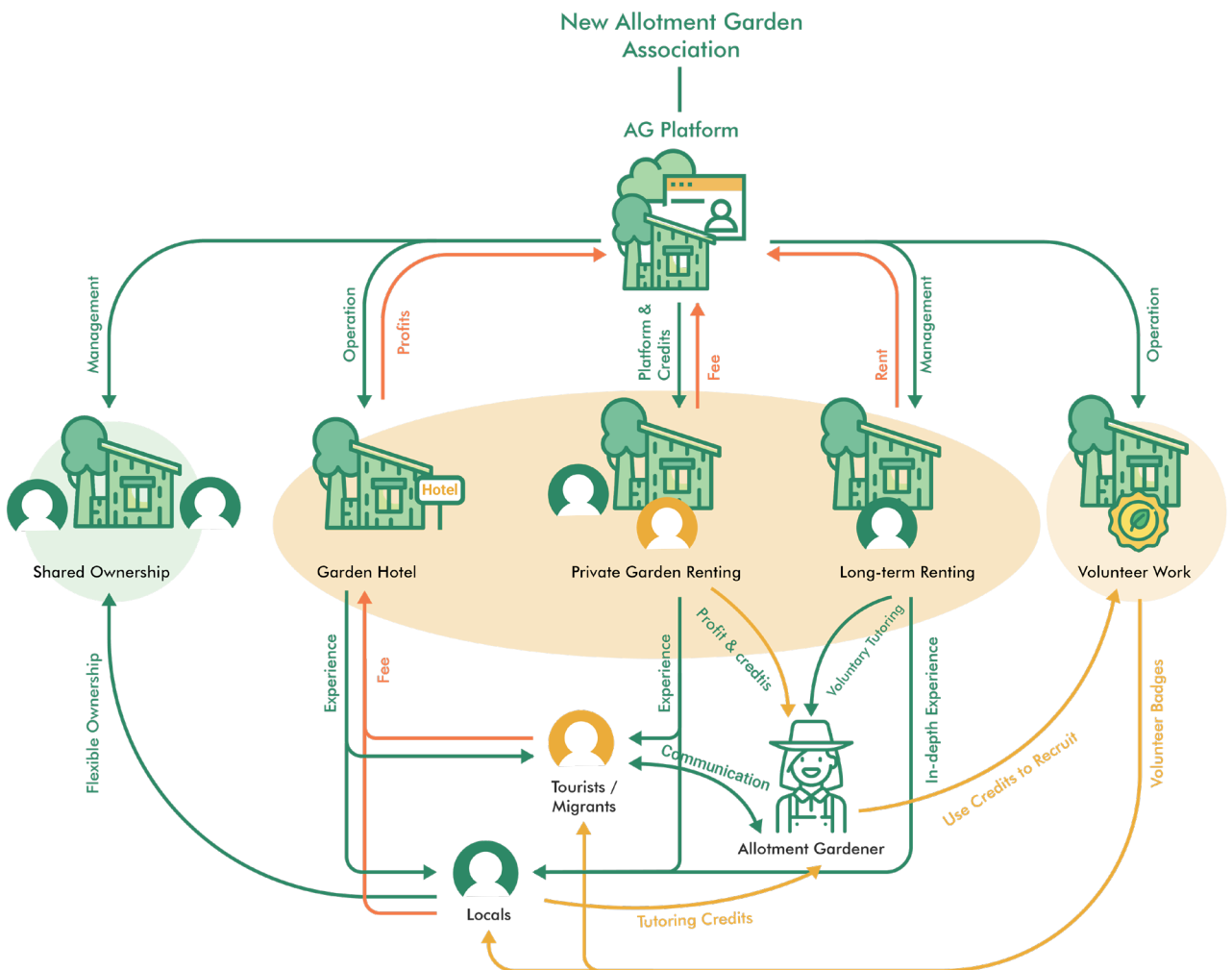


Figure 6.7: Stakeholder mapping with five new models

B. Scale mapping

For a new allotment garden area, or modify on the existing ones, the biggest difference is having the rentable gardens to ensure the flexibility of an allotment garden area. Therefore, a scale mapping was created to indicate the division of the rentable allotment gardens and the private ones. According to the diagram, the proposed percentages of both were demonstrated on the map of 35% and 65% (Figure 6.8).

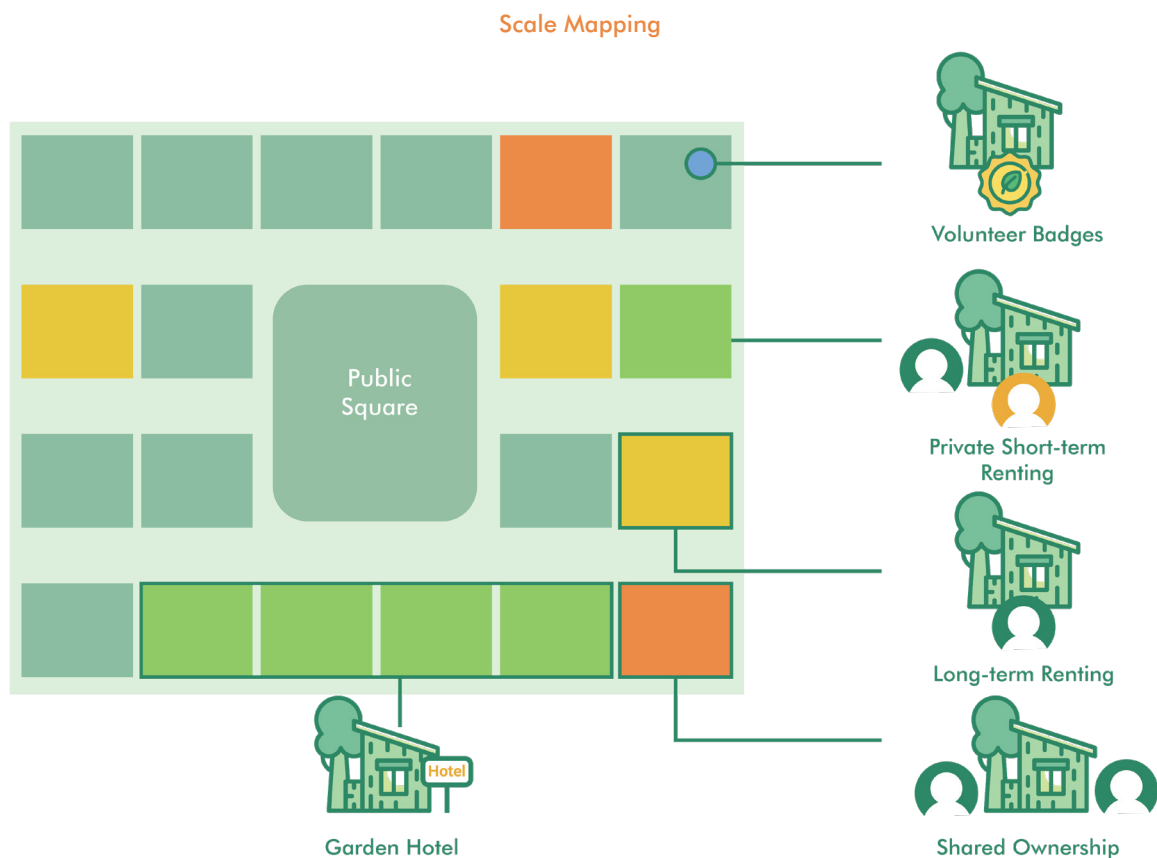


Figure 6.8: The proposed distribution of different types of gardening models

In the 35% of rentable allotment gardens, it is suggested that the new allotment garden association takes the responsibility of checking the average amount of long-term renting allotment gardens is sustaining in about 15% excepting the garden hotel percentage.

C. Storylines in 4 models of new allotment gardens

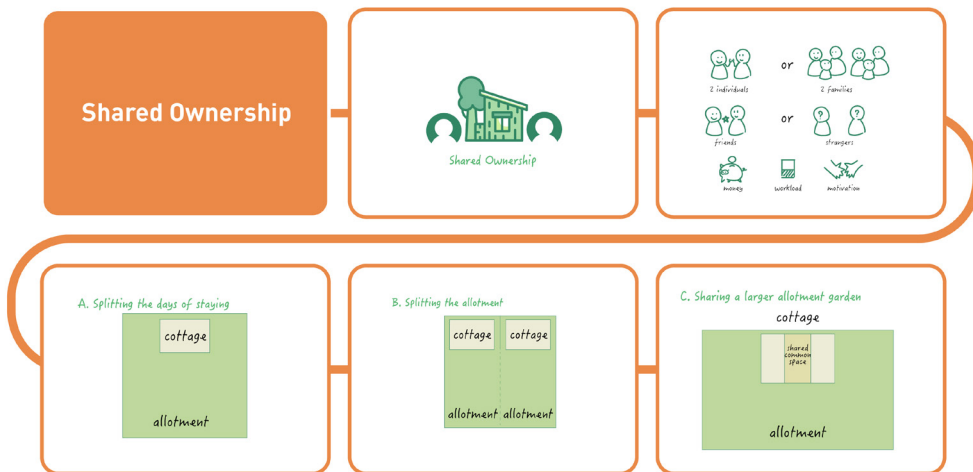
The wider community

The storylines created for the wider community were focusing on the experience of involving in the gardening community. For the wider community, it is important to know what gardening activities they are more interested in, and in what ways they would like to be engaged in the allotment garden scenarios in the future. Hence, the storylines contain many inspirational options for the participants to image.

Allotment gardeners:

Allotment gardeners were the groups of people embracing the wider community and should be changed to be more inclusive in the future. For this group of people, the core of the prototype testing is to create inclusive scenarios and to test their acceptability as individuals and as the gardener community. Hence, the storylines contain scenarios such as renting their own allotment gardens or having themselves being the garden tutors.

Shared Ownership



Long-term Renting Indepth Experience

Long-term Renting Indepth Experience



Long-term Renting



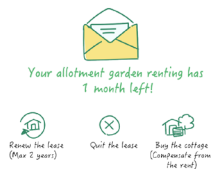
The allotment garden should be...



new allotment garden
xxxx, xxxxx, 232



Gardeners can sign up for garden tutor to help the new gardeners. In return, they get credits that they can use to recruit volunteers.



Short-term Renting Gardening Experience: Tenants

Short-term Renting Gardening Experience



Private Garden



Garden Hotel



Basic facilities

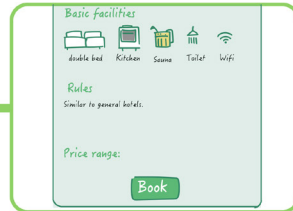
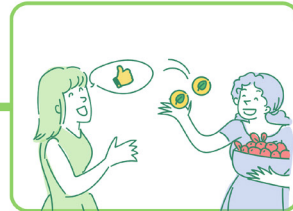
Rules

Some specific rules made by the gardener.

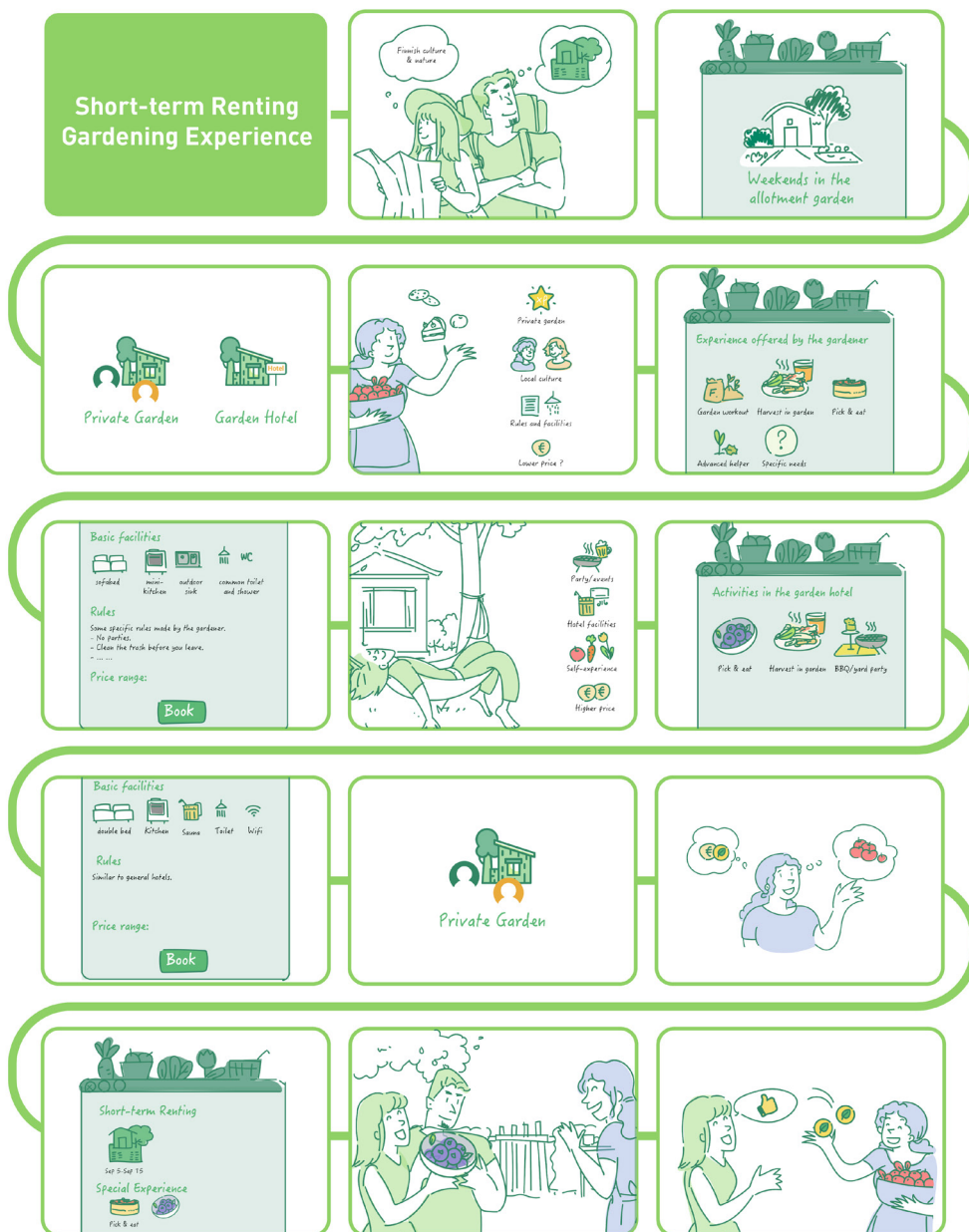
- No parties.
- Clean the trash before you leave.

Price range:

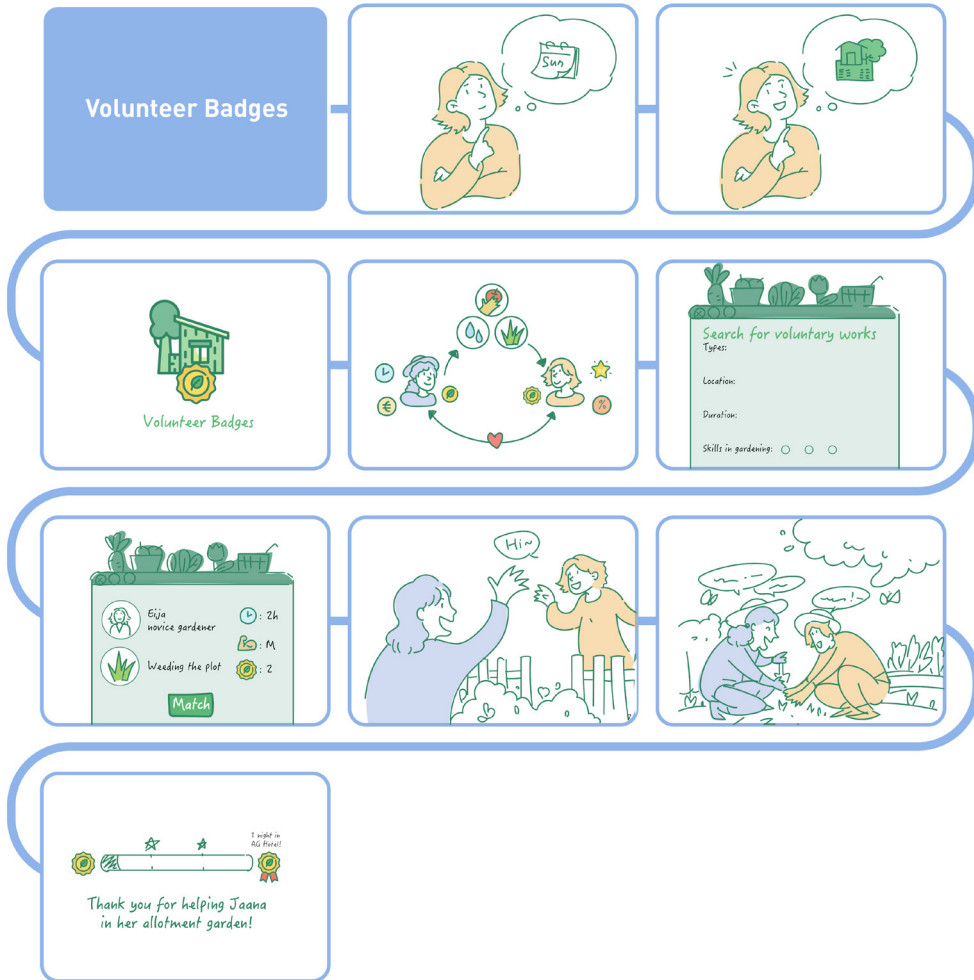
Book



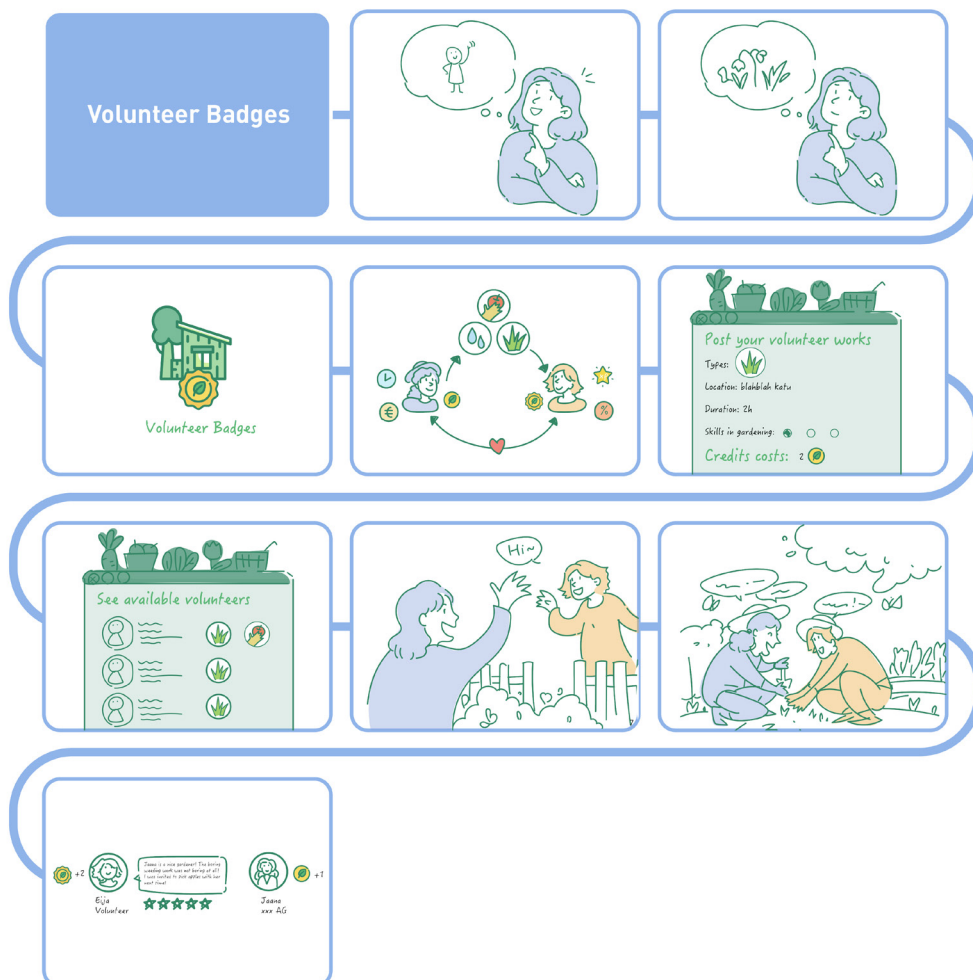
Short-term Renting Gardening Experience: Gardeners



Volunteer Badges: Volunteers



Volunteer Badges: Gardeners



6.2.3 Prototype and evaluation results

A. Results from the wider community

From the results of prototype testing and evaluation forms, non-gardeners show a positive attitude to new models of Volunteer Badges, Short-term and Long-term Renting. For the model of Shared Ownership, there were many controversies that remain.

As for the Volunteer Badges Model, participants agreed that helping gardeners with volunteer works is a good way to learn gardening skills. They prefer to do volunteer work if the location is near and convenient to go and easy to find. Receiving the achievement of working and badges as a bonus would encourage their participation. However, all of them have concerns about the information gathering platform. Due to the fact that gardening works and ways of doing it might be various from gardeners to gardeners, it is not sure if the platform could provide accurate information that valid for both gardeners and volunteers. It is also suggested that looking for some volunteer platforms might give some inspiration to this model (PE 01).

For the Short-term Renting Model, the gardening hotel seemed to be more attractive for the non-gardener tourists if it is at an affordable price. Both the private garden and the garden hotel are good places for them to enjoy nature. While in the private garden, it creates more chances to learn about local culture. All of the participants think that price is the decisive factor in choosing a private garden or a garden hotel, and they all agree that a well-equipped garden hotel should be expensive than a private one. There are some good suggestions mentioning that family activities and kids friendly would add benefits to the Short-term Renting Model. For the private garden, it could be a way to apply the similar idea of Working Holiday to reduce the cost of staying in a private garden.



Figure 6.9: Storytelling, prototype testing with non-gardeners

As for the Long-term Renting Model, two of the participants strongly agreed that it's good to have a one-year trial period before buying their own allotment garden since it can be a good way to learn gardening skills and get familiar with the community. When considering the factors that affect the allotment garden choosing, two of them prioritized the location and price, while the rest of the participants put first the environment and facilities of an allotment garden. Community and neighbors are the least important for all of them. All of them like the idea of gardening tutor especially the garden tutor. Regarding the rule of only allowed to rent for a maximum of 1 year, the participant who thinks it is acceptable holds the view that it is worth the risk to try. However, there are participants who don't think it is worthy to take the risk. The biggest attraction of long-term renting is that it provides an opportunity for the new gardeners to learn in-depth gardening experience. Nevertheless, they have the concerns of having to adapt to the new neighborhood again when moving to other areas or unable to find another suitable one to buy.

The Shared Ownership Model does not follow the scenario storytelling but focuses on gathering feedback and comments on the design of the sharing modes. Among the three types of sharing ways, splitting the days of staying in the allotment garden had most of the doubts and worries. Thinking that different people might have different wishes and habits of maintaining the garden and the cottage, it might be hard to make the contract together. The type of splitting the allotment is more acceptable for them and with benefits of halved workload. It is also suggested by one of the participants that the way of splitting the allotment can be flexible and decided within the co-owners. The third mode of having a larger space for sharing gets good comments regarding the case of sharing by two families.



Figure 6.10: Filling information and evaluation forms

B. Results from the allotment gardeners

Due to the fact that the storylines of allotment gardeners are different from the non-gardeners', I modified the evaluation form as well to get feedback and comments from the gardener's perspective. With the two gardeners, I aimed at presenting the scenarios to test the acceptability of gardeners when the wider inclusiveness needs some 'sacrifice' from them. The four models gained good comments from them and opened up their mind of imaging the possibilities about future allotment gardens (PE 02).

In terms of the Short-term Renting Model, both of the allotment gardeners said that it is not a problem to rent out their allotment garden to visitors or offer some special experience to them. However, they mentioned that they might feel disturbed if their neighbors are renting it. The most attractive factors for them to rent their own garden are to get some extra money and let the tourists experience the local garden life. But they do not really care about the credits earned from renting the garden. After hearing the story, one of the gardeners feel distant about the persona's journey and not really want to rent the allotment garden for short-term living. However, it is also interesting to notice that both gardeners admitted that they would love to experience the private garden when traveling abroad as a good way to spend a weekend. The biggest concerns for them are the privacy issues and maintenance of the cottage. Additionally, they need to set many rules and information for the tourists.

For the Long-term Renting Model, the two allotment gardeners had slightly different opinions on having the trial period. One of the gardeners thinks that it is good to have the trial period while the other one thinks it is not necessary. As for learning gardening skills, both gardeners said that it is hard to learn everything since gardening is a long-period and complicate experimentation. However, they gave some good suggestions on how to get the novice gardeners onboard faster. For instance, having some annual courses like cutting trees and fertilizing might be good for those who don't have skills at all. Someone from the garden community can organize some activities that are difficult for the novice gardeners and do it together with them. It is also a good idea to make a year calendar about gardening jobs to be done so everyone can check and follow.

When talking about having a neighbor who rents the allotment garden for one year, both of them seemed to be worried and not very acceptable to such a situation. The biggest concern for them is not knowing the neighbor beforehand. In this case, they mentioned that it would be better if the gardeners can check the new tenants or the association can select the people to move in. It is an important issue for the private gardeners and the new tenants to build trust between each other. Both gardeners would love to sign up for a garden tutor to help and teach the new gardeners. However, they are not sure if they have enough time to contribute.

For the model of Volunteer Badges, the most attractive factors for them to recruit garden volunteers are to save time and energy and to do the work that they cannot manage themselves. In spite of that, they concern about the skills of volunteers might vary. Although they are willing to teach volunteers how to do the task, explaining tasks to volunteers also requires skills and learnings to do in a nice way. The comments and credits system gain a high score from both gardeners. They pointed out that having such a system would greatly stimulate people in the community to be nice to each other. However, considering the feasibility of the badges - credits system, it still needs a comprehensive plan to make it work since volunteers and gardeners might want to have concrete benefits from it.

6.3 Summary

Prototype and evaluation is an efficient way to test out concepts and collecting feedback for improvement. The process of making the ideas that in people's mind into visualized concepts is a process of validating crazy thoughts with elaborate logic. Summarizing the prototype testing and evaluation with 5 participants, many interesting findings and feedbacks were accumulated to modify concepts for future allotment garden visions in a more concrete and sophisticated way.

Regarding the proposed four new models of allotment gardening, Both allotment gardeners and the wider community like the benefits created by gardening activities and both of them cherish the values in allotment gardens such as nature, culture and hands-on experience. It is a good sign that many of the gardeners have the awareness of being more inclusive to the wider community. Nevertheless, it is a hard transformation for the gardeners to share the benefits with the wider community. Allotment gardeners tend to be on the situation of "Yes! It is a great idea but not in my backyard." Indeed, when considering the situation of renting their own gardens or having new neighbors with a shorter tenancy, the worries come from doubting the stability and harmony of the existing garden community. The mindset changing and trust-building in the future should be tackled from both the gardener side and the non-gardener side, and step by step with different target groups. For non-gardeners, they should respect the garden community and their culture. And for gardeners, they should understand the flexibility and try to involve them to create a new shared culture together with the non-gardeners.

Action Roadmap of Allotment Garden 2030



07

Design Proposal

*Making allotment gardens the treasure
for the city and all*

7. Design Proposal

In the hectic city, we live a bustling and monotonous life and are surrounded by buildings all in the same keys. When you walk around in Helsinki, you may be attracted by some colorful cottages and beautiful small gardens. What are those places? For whom are they built? If you have a free afternoon or a free weekend, how about going to one of this cottage and just slow down the day and enjoy nature?

Allotment gardens, *Siirtolapuutarha* in Finnish, are places with a parcel of land for gardening or planting with a small cottage on them. Originally established due to the food shortage during wartime in the last century, allotment gardens have developed a long and continuous history and tradition. Nowadays, as one important type of urban gardening, there are enormous values in allotment gardens for individuals as well as for the city. Allotment gardens not only provide easy access to nature for urban residents but also promote a sustainable and healthy lifestyle. Additionally, allotment garden activities are good ways to vitalize neighborhoods and enhance social cohesion. More precisely in the Finnish context, allotment gardens retain the Finnish culture history, and to some extent, provide an alternative for summer cottages.

Having all those values, allotment gardens can be seen as the treasure of the city and for people who have it. Since the demand for allotment garden is growing, the price is increasing. Currently, demand and prices are still high. However, because the garden is private, for those who do not have allotment gardens, people either have little knowledge about this type of gardening or hold a negative attitude towards allotment gardens because they feel they are being excluded. As for the internal garden community, the main groups are the senior and elderly gardeners. With such a situation, many allotment garden communities are facing the problem of being outdated. “It is a fantastic idea but still organized like in the 1930s,” said an interviewee.

According to the research on allotment gardens in Helsinki, there is a trend of growing younger in the allotment garden community. With the growing interests of allotment gardening, the associations and many gardeners started to consider the inclusiveness of allotment gardens in a wider community. In the year 2026, the lease of the land for allotment gardens with the city has to be renewed. Although it is not likely that the lease will be terminated, it is about time to propose a new way of operating allotment gardens. With the younger generation and the wider community, what should be kept and what could be changed for the future allotment garden?

The design brief is aiming at envisioning the future allotment garden in 2030 and after. In a culture of sharing and a sense of community belonging, how might we bring the inclusiveness to allotment gardening? If allotment gardens could be more flexible, what does it look like? If the allotment garden can be enjoyed by more people, who would be the target groups?

Outcomes

The study uses the method of co-design to gather insights and to envision the future. With the target users of allotment gardeners and the wider community, we map out the vision of future allotments garden together. To achieve the vision, a progressive allotment garden movement is proposed to involve different target groups in different stages of the movement. The estimated outcomes are listed below:

1. The strategy of the allotment garden vision in 2030
2. Detailed action plan

7.1 Getting on Board: Target Groups

When promoting social change, it is important to have a comprehensive understanding of group dynamics. Identifying group attributes and then providing a process that nudges the group engagement is the first step to enable behavioral change (Lewin, 1947a). In the allotment garden context, there are groups in different active levels from both allotment gardens and the wider community. To direct towards an inclusive future, target groups in allotment garden movement are categorized and mapped out with their typical behaviors.

Active Gardeners



<i>Emotion in gardening</i>	●	●	●	●	○
<i>Dependence on community</i>	●	●	●	●	●
<i>Acceptability to change</i>	●	●	●	●	●
<i>Decision maker intervention</i>	●	○	○	○	○

The active gardeners are a relatively young group. For this group, they appreciate having the allotment garden for its lifestyle and sustainability. Enabling more people to enjoy such a great thing is their goal. Grown in a shared culture, they are used to the idea of sharing. They are energetic gardeners looking for new ways to do things to activate the garden community. Desiring to change the current community to a more lively and fresh

one for all, they are trying to involve more into the community via activities both internally and externally.

For the active gardeners, they can be encouraged to test out new ideas and new models of allotment gardens in advance during the prototyping period. They can form a group as a testing panel for collecting feedbacks as real users of new allotment garden models.

Active Wider Community



Emotion in gardening



Dependence on community



Acceptability to change



Decision maker intervention



The active wider community is a group of people who are actively involved in urban gardening. Having some basic knowledge about allotment gardening, they are interested in experiencing the garden life. Similar to the active gardeners, they are the younger generation in pursuit of a sustainable and organic life. However, having limited time, money and skills on gardening, they are unsure about their passion and hesitant to own a garden. Consequently, the sharing model would be a good way to connect the active wider community and the active gardeners together.

The decision maker can create opportunities for the active wider community to collaborate with the active gardeners by forming a testing panel of the wider community to correspond to the gardener testing panel. By experiencing and evaluating new garden models, the active wider community can have continuous interaction with the garden community.

Allotment Garden Association



Leading responsibilities



Acceptability to change

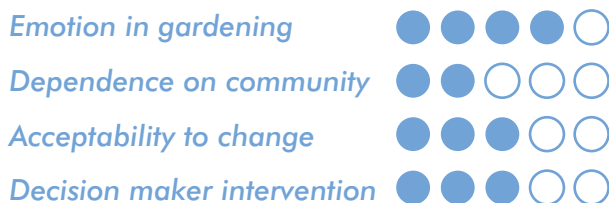


In the proposal of future allotment garden strategy, the allotment garden association would have the leading responsibilities to involve the wider community. Since there are more functions and new models of allotment gardens that require more energy in operation, the newly added allotment garden association platform could be outsourced or

maintained a specific team. Since the services and management can be done through the platform, allotment garden associations can be better connected with each other and with the wider community.

Since the allotment garden association is on an organizational level, the change should take place gradually. Taking the leading role, the allotment garden association should hold an overall picture of the garden movement and know about all target groups. For the inner community, besides the usual internal events for community building and the sense of belonging, they could create a loose but active environment for cultivating new ideas and promoting changes involving neighborhood participation. They can give support to the active gardeners for implementing new ways of doing things.

Neutral Gardeners



In the garden community, there is a group of people who are not actively involved in but still have some ideas in mind. For them, the key is to provide a channel for engagement. The neutral gardeners understand that it will be good to be more open and inclusive. However, they might not really want to take those actions as their tasks. Even though they are not into making innovation, they might have some ideas when properly inspired.

For this group, decision maker can provide some opportunities for them to be involved in some inspirational workshops or testing prototype in the middle stage of the change. With a more concise and immersed scenario, they can contribute to constructive ideas and feedback for detailed concepts. When they experience the advantages of the new models and see their ideas were taken into consideration, they would be more engaged in the inclusive garden community.

Neutral Wider Community



In the future, there will be more people caring about living sustainability. And this will trigger the engagement of the neutral wider community in the allotment garden movement. For this group of people, the idea is similar to the neutral gardener group that to find a way for engagement, but for the purpose of sharing and promoting sustainability. Although they are used to the culture of sharing, this group is not like an active explorer. They might not know much about the allotment garden, but the lifestyle and easy-access nature would be really attractive to them.

For this group, they can first involve in some events or open day activities organized by the garden association. After they learn more about this garden activity and the movement, decision maker or garden associations can encourage deeper engagement with gardeners by providing them actual benefits in this specific type of gardening and new models.

Passive Gardeners



Emotion in gardening



Dependence on community



Acceptability to change



Decision maker intervention



As for the passive gardener group, they are the first group of people when the allotment gardens were established. They are relatively in elder age since they have been operating the garden association and in the garden activity for decades. They have comprehensive knowledge of allotment garden practice and abundant experience regarding its development history. However, the deep root in the gardening community might prevent them from embracing fresh ideas. Since they are used to the traditional garden, they show less support in making changes or movement for the allotment garden.

Nevertheless, the passive gardeners are the group who retain the original soul of the traditional allotment garden, which will still be a treasure in the future allotment garden scenario. Hence, creating mutual understanding is the core mission in this group. The decision maker or the garden association should take a more active role in elaborating the strategy and action plan clearly to them. Understanding the future trend and knowing how the changes would affect the garden community especially on themselves could release their stress and uncertainty for the garden movement. It is also very important for the decision maker to involve them in preserving and sharing the culture and history of traditional allotment gardening for and with the younger generation. So the garden community in the future will not lose the spirit from its origin even with the wider community.

7.2 Moving Towards a Sustainable Lifestyle

Having the target groups on board, it is important to keep an overall picture for envisioning the strategy as a higher level guideline. From all groups in allotment garden movement and the wider community, the intangible power that triggers the movement is the values in allotment gardening. Even though different groups prioritize different values that an allotment garden creates, they all share the wish for a better lifestyle. By sharing the treasure of an allotment garden, more and more people can be involved in sustainable life in the future.

The movement toward the sustainable lifestyle is mapped below to visualize the relationship changes between the gardener and the wider community (Figure 7.1). From the perspective of the gardeners, they are moving from enjoying their private garden life in the garden community to involving the wider community to experience the garden life together. From the perspective of the non-gardeners, they are walking in the garden community by first getting inspired, then getting excited and in the end becoming part of the inclusive new garden community. Eventually, through the new community that gardeners and non-gardeners create together, more and more people are involved in the movement of having a sustainable lifestyle.

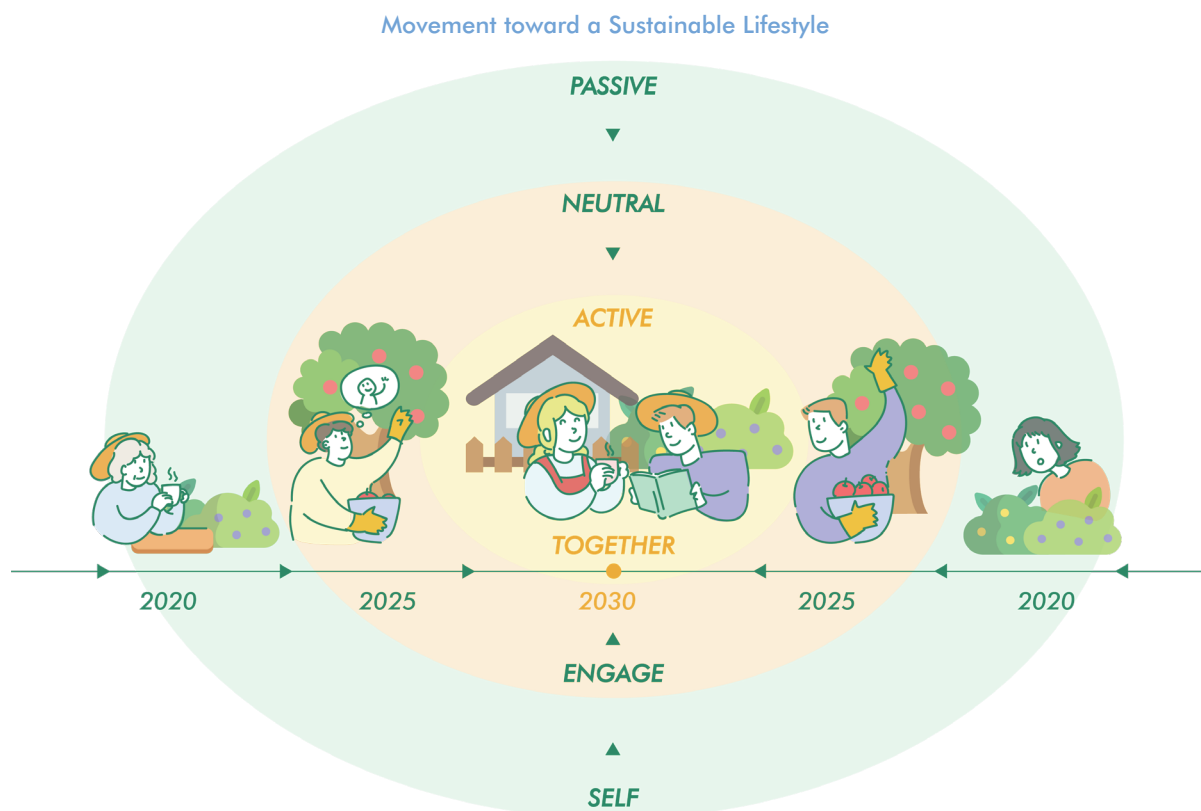


Figure 7.1: Gardeners and the wider community are gathering together in 2030

7.3 Inclusive Strategy: Allotment Garden in 2030

Pattern for Movement Visualization

With the defined goal of sustainability, the future allotment garden is envisaged to be an inclusive and flexible urban gardening activity for all people in the city. Taking target groups into strategy planning, a progressing action plan including clear action goals is mapped out through a strategic roadmap for the future 10 years and beyond. The timeline for taking action is an estimated time to refer to the allotment garden movement. Nevertheless, the roadmap aims to clarify the change process together with the proposed concepts and focused target groups through the big picture, it is more about defining actions on all stages rather than making a concrete schedule to follow. The practice according to the strategy is an iterating process based on the real situation and the feedback from the target group.



ENCOUNTERING

Mild interaction between gardeners and the wider community. Creating opportunities for encountering. Arouse the curiosity of the wider community through some small changes in current allotment gardens.



INSPIRING

Organize internal activities to develop an active community for allotment gardeners. Arrange external public events with non-gardeners to promote closer communication. This is a stage for inspiring gardeners and non-gardeners to feel the community and create a sense of belonging.



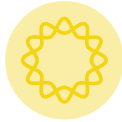
SHARING

Getting familiar with the idea of sharing. Before further engaging with the wider community, allotment gardeners can experiment with the concept of sharing within the garden community. This is the stage for internal running-in and coordination between those active gardeners and the less active one regarding the sharing mindset.



GATHERING

When the garden community has achieved an inclusive mindset, there will be less resistance against promoting wider inclusiveness. Gardeners can gather and interact with non-gardeners in the wider community and involve them in the allotment garden movement.



BLOOMING

This is the stage that gardeners and non-gardeners gather together in a new allotment garden community. In this community, there is no boundary between gardeners and non-gardening. Similarly, there are no specific areas for allotment gardening but only like-minded people with the same pursuit of a sustainable lifestyle. Consequently, the garden movement until this stage can be flexible and bloom in the city through the interaction among people with a parcel of land.

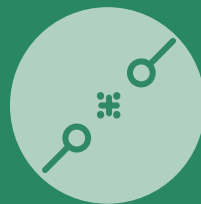
7.4 Roadmapping the Action Plan

Due to time constraints, I came up with concrete concepts as examples for implementation mainly based on the research findings and ideas collected from the co-creation workshop. As a concept development on the strategic level, I did not plan to go for details, but to give an overall picture of how the garden movement can be initiated following the vision strategy. According to the progressing action plan, concepts I generated include their action goals as well as focused target groups to be key factors. Based on the analysis, I categorized all factors and elements for each concept that needs to be taken into consideration. Specifically, I added a process for self-checking and evaluating before heading to the next action. This is to build a self-organized development for the new garden community that the decision maker or garden associations, gardeners and the wider community can supervise the garden movement themselves and evaluate their actions for improvement together.



01 Encountering | Concept A:

SECRET BOX



Aim

Creating a warm and kind image of allotment garden community for the neighborhood by sharing extra food from gardens.

Concept Description

Every Friday, a 'pop-up' hut at the gate of the allotment garden with some wooden boxes and a notice board. In the boxes, gardeners can leave their extra fruits, vegetables as gifts for their neighbors or people passing by. Non-gardeners can take the food, leave a message or a small amount of contribution to the garden community. When the gardeners plan external events, they can also have a voting on the board for collecting ideas or opinions from the neighborhood.

Target Group



Passive
Gardeners



Neutral
Wider Community

Raw Materials



Pop-up Hut



Notice Board for
Wider Community



Wooden Boxes



02 Inspiring | Concept B:

GARDEN WALKTHROUGH



Aim

Vitalizing the garden community and the neighborhood nearby by creating a new culture of allotment gardening involving the public. The garden walk-through can be a way to inspire the wider community to know about the gardening lifestyle.

Concept Description

Annually garden walk-through activity is held in allotment garden areas as a new tradition in the future. On that day, the garden area is opened to the public so everyone is welcome. The main pathway in the garden area is decorated and the culture and history of the garden will be introduced to the wider community. Allotment gardeners prepare organic food from their own gardens and make a garden food market along the pathway. Residents living nearby are invited to walk through the allotment garden area, enjoy nature, communicate with gardeners and taste the food made by them.

Target Group



Active
Gardeners



Active
Wider Community



Neutral
Wider Community

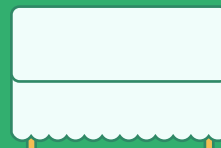


Garden
Association

Raw Materials



Brochure +
Visiting Map



Long Tables

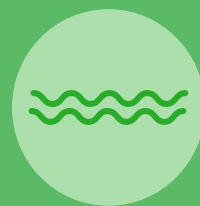


Harvest in Gardens



03 Sharing | Concept C:

SHARED OWNERSHIP



Aim

Breaking the stereotype of standardized cottages and single ownership. Cultivating the culture of sharing inside the garden community through co-owning an allotment garden with another individual or family.

Concept Description

When the neighborhood is vitalized and involved in allotment garden activities, it is time to make the inner garden community more open and flexible. In the future, an allotment garden can be shared by two individuals or families. In this way, young families with less money and time can split the workload and investment with their friends. Co-owners can customize the way of sharing and managing gardens via online contracts. The contract enables the possibility of sharing with strangers, which will be a common culture in the future. With different needs, there are different shared allotment gardens: i. two separate cottages with a shared plot; ii. one cottage and a plot but split the time staying in the garden or iii. one bigger allotment garden for two families.

Target Group



Active
Gardeners



Neutral
Gardeners



Active
Wider Community

Raw Materials



Online Platform



Shared Contract



Mobile devices



New Cottages

**Garden
Association**



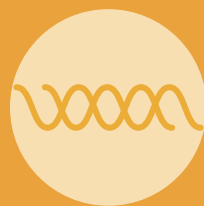
**The Wider
Community**



**Allotment
Gardeners**

04 Gathering | Concept D:

ASSOCIATION PLATFORM



Aim

Establishing an integrated system to systematically manage allotment garden associations and gardening services through the online platform.

Concept Description

This allotment garden association platform is proposed to support the Federation of Finnish Allotment Garden Association. The association platform enables new models of allotment gardening. Through the on-line platform, allotment gardens can be connected to the wider community on a larger scale via more flexible channels. On the one hand, knowing about allotment gardening and experiencing the garden life will become easier for the wider community. On the other hand, allotment gardeners can receive help and make better use of their gardens when needed so that their burdens on maintaining the garden can be relieved. This requires a specific group or a company to manage and update all information and data from each allotment garden association and maintain the online platform.

Target Group



Garden
Association

Raw Materials



Online Platform



Technical Support



Mobile devices



Management
Team



04 Gathering | Concept E:

SHORT-TERM RENTING



Aim

Providing local gardening experience for visitors for a short-term less than one month.

Concept Description

With the support of the association platform, rentable allotment gardens will become a new way of experiencing gardening life. There are two short-term renting models. i. Garden Hotel: operated by the allotment garden association. Tenants can enjoy the garden life with complete services and gardening equipment for family or group activities. ii. private gardens rented by allotment gardeners. Tenants can experience local life and interact with the gardeners. Gardeners can share the culture of the allotment garden lifestyle with visitors. The main purpose is not to make profits but to encourage communication between gardeners and the wider community. The profit from the Garden Hotel will go to the maintenance of the hotel and the association platform. In this model, gardeners can earn extra money. More importantly, they get garden credits that can be used for recruiting helpers for other gardening works.

Target Group



Active
Gardeners



Active
Wider Community



Garden
Association

Raw Materials



Online Platform



Garden Hotel



Mobile devices

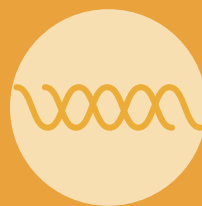


Management &
Maintenance Team



04 Gathering | Concept F:

LONG-TERM TRIAL



Aim

For young and novice gardeners who consider buying their own garden to get familiar with gardening life and to learn basic gardening skills and acquire in-depth experience by renting the allotment garden for one year.

Concept Description

In the future, there are a specific amount of long-term rental gardens built for the younger generation who has less experience or are not sure about their time and motivation in gardening. The one year trial creates a chance for them to experience gardening work in different seasons, to get along with the garden community and to learn gardening skills, rules and culture in allotment gardening. When there is a new gardener joining, the garden community will prepare a welcome package including basic information of planting, information about garden shops and courses, tools and seeds, etc. Gardeners are recommended to sign up as tutors to help the newcomers. In return, they get discounts or free use of some gardening tools from the association. After the trial, tenant gardeners can decide to buy, renew or to quit the lease.

Target Group



All Groups

Raw Materials



Online Platform



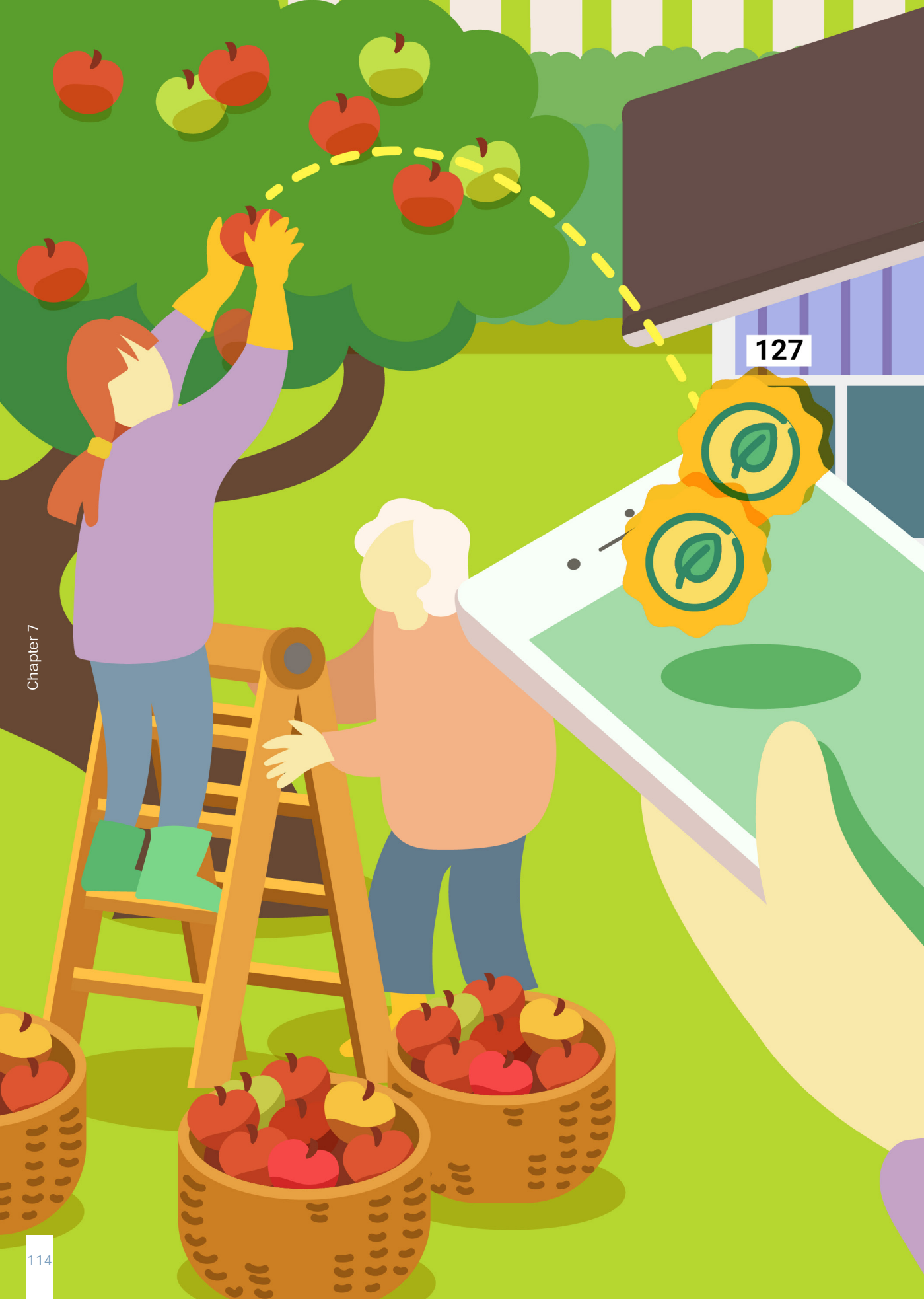
Long-term Renting
Gardens



Mobile devices

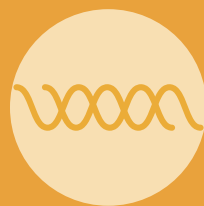


Welcome Package



04 Gathering | Concept G:

BADGE-CREDIT SYSTEM



Aim

Creating a close connection between gardeners and the neighborhood by promoting the culture of sharing and peer learning by helping gardeners with their volunteer works.

Concept Description

In the future, young gardeners have less time to do volunteer works required by the allotment garden associations. A new way to handle it is to share the workload with others and at the same time provide chances for others to experience gardening activities. Via the platform, gardeners can recruit helpers from the wider community by using credits they earned through renting allotment garden or tutoring novice gardeners. The wider community can find the works they would like to help with or experience in allotment gardens. By helping gardeners, they get to learn gardening skills and gain badges in their accounts. As a way to constantly involve the wider community in gardening activities, the credit-badge system is supported by the garden association. Volunteers can convert badges they gain to some discount of food provided by the allotment garden or a free night stay in the Garden Hotel.

Target Group



All Groups

Raw Materials



Online Platform



Credit-badge System



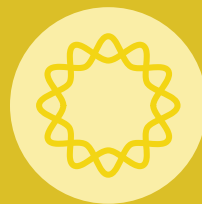
Mobile devices




Welcome to
POP-UP
DREAM
GARDEN

05 Blooming | Concept H:

POP-UP MOVEMENT



Aim

Expanding the gardening life into a sustainable lifestyle to engage all residents in the city.

Concept Description

When enabling inclusivity is no longer a pressing task for allotment garden communities and the wider community, empowering wider engagement is the new goal for the new garden community. This example is a speculative concept of pop-up movement in the city. Allotment gardens do not have to be in one specific area, gardening is not only for gardeners. The pop-up garden engages all in designing their dream gardens with their expectations of a sustainable lifestyle.

Target Group



All Groups



08

Conclusion & Discussion

8. Conclusion & Discussion

Allotment garden is a great invention that enables its owner to enjoy a joint pleasure of nature and urban life. However, in Helsinki, a call for updates in the structure and the way of operation of allotment garden has been discovered as the shift in ownership to the next generation gradually takes place. Many hope that allotment gardening, which is currently a rather privileged, if not exclusive, activity, can be more inviting and inclusive to the general public. The inclusivity of allotment garden can be enhanced by involving a wider community, together with the current allotment garden owners, into a co-design project in which they are encouraged to explore a new way of organizing allotment gardening activities.

In this research project, four site visits, seven interviews, thirty-three surveys and a two-month participation observation were conducted to comprehensively understand behaviors and activities of allotment gardeners, garden associations, non-gardeners and community gardeners. By investigating the current situation of allotment gardening, I discovered the misunderstanding between gardeners and the wider community, as well as the discrepancy in their perception of allotment garden. Based on insights gathered in the case studies, a co-creation workshop was conducted with eight participants of gardeners and people from the wider community. During the workshop, in-depth knowledge about gardeners and non-gardeners regarding the reaction of social change was collected to build the model of typical target groups. From the workshop, ideas for future allotment gardening were congregated to further develop concepts for prototype and evaluation. As a result, a strategy for allotment gardening was proposed for decision makers with the outcomes of an action roadmap for changing in the year 2030 including eight concrete concepts for implementation to promote a wider inclusiveness.

8.1 Allotment Garden Today

The current way of operating allotment gardens has become barriers for the garden association preventing fresh ideas and innovation. Many of the allotment garden associations have the awareness of involving a wider community. However, they do not know how to approach them. This is mainly due to the fact that allotment garden associations are made up of gardeners in their garden communities who volunteer to take the responsibilities. Most of them have no extra time and energy to devise or implement new ideas and make changes happens.

In addition, on the one hand, the elder gardeners tend to be less interested in making changes or interact with the wider community; on the other hand, there are more and more young family with kids joining the allotment garden community and they have less time to be engaged in the garden community.

The wider community are interested in allotment gardening and would love to experience it, but they do not know how to participate. They tend to picture allotment gardening as exclusive and privileged activities that they are not welcome to be part of.

8.2 Envisioning Allotment Garden Tomorrow

The wider community are attracted by the gardening experience in an urban setting and the organic and sustainable lifestyle. They are eager to learn gardening skills. However, the price of purchasing an allotment garden is overwhelming to them and they are unsure about how much time they will be able to commit to the allotment garden. Therefore, they hope that they can have a trial period when they can really experience the allotment garden before they make financial and time commitment to the allotment garden. They would also like the possibility to share the cost responsibilities with their friends to have a lower investment and keep themselves motivated.

There is a contradiction in the attitude of the allotment gardeners towards changes. On the one hand, the allotment gardeners would love the wider community to be involved in experiencing life of gardeners. On the other hand, they wish the wider community can learn and respect the tradition of the community. However, some of the allotment gardeners are skeptical about that the wider community will respect their culture and traditions. As a result, some of them have the idea like “Yes, that would be good, but not in my backyard.” Nonetheless, during the research, it is found that the younger respondents of both allotment gardeners and the wider community presented a stronger willingness to share.

Designing Strategy

Based on the findings from allotment gardeners and the wider community, target groups are mapped out with the social change movement according to the level of supports and opposition.

Gardeners and the wider community are invited to be engaged in the current garden community and create a new model of garden community for all. In correspondence with the goal of achieving a sustainable lifestyle, gardeners and the wider community came together to reach a higher level of inclusiveness.

Roadmap for Allotment Gardening in 2030

The ideas generated in the workshop were further developed into detailed concepts to support the movement in a concrete level. There are in total eight concepts namely: a) secret box; b) allotment garden walk-through; c) allotment garden association platform; d) short-term renting gardening experience; e) long-term trial in-depth experience; f) badge-credit system; g) sharing ownership and h) allotment garden pop-up movement. These concepts are used to create a roadmap for implementing the allotment garden movement in the year 2030 in five steps:

Step 1, Encountering

Step 2, Inspiring

Step 3. Sharing

Step 4. Gathering

Step 5. Blooming

8.3 Reflection and Limitations

This is a practice-oriented research project, and therefore the process of conducting this thesis for me is also a process of learning and practicing co-design method. I chose allotment gardening, a type of urban gardening that has been under-researched as my research topic. The originality of the research is that it adopts a novel angle to examine the contradiction between gardeners and the wider community to promote an inclusive and flexible future model for allotment gardening. During the research project, I applied skills and knowledge in service design and co-design to solve the problems and to propel the project effectively. I also utilized theories from social change management, community building social movement as theoretical support to help me to dig deeper in case studies and developing the final concepts.

Building connection with different target groups is essential in this co-design project. Allotment gardening, due to the internality of its community, is not easily accessible for an “outsider”. The language barrier was also one obstacle that hindered the progress of the research. In addition, allotment gardening is not an all-year activity and allotment gardeners do not reside in their gardens permanently. Most of them only start to be active from the late spring. This again adds to the difficulties in accessing gardeners willing to participate in the research in that the field research and case studies could be only conducted in the short Finnish summer, when most of the gardeners returned to their residence in the allotment gardens. It was a process of setbacks and frustrations. Recruiting participants and finding suitable time for all to organize workshop is another challenge in this project. Even though I tried to include a more demographically diverse group of participants, working out to set a time that suits the schedule of all was really difficult. Therefore, this aim was unfortunately not achieved in the end.

8.4 Future Research Directions

This thesis explores on promoting wider inclusiveness for allotment gardening in the future through the method of co-design. It is proposed that allotment gardening will lead the movement of sustainable lifestyle for all urban residents. The core concept of this research is matching different target groups with the suitable action for inclusiveness. In future research, other types of urban gardening can be taken into consideration to enrich the practice in urban gardening. For instance, the strategy of allotment gardening movement, if applied to community gardening, must be arranged in a different way according to their target group attributes.

The thesis contributes to identifying and promoting social change through co-design. Involving group participation to solve the problem and envision the future together provides an example of co-design practicality in dealing with social and organizational change. In future work, co-design strategy can be utilized as a guideline for social change project.

Due to the fact that the outcomes are based on research in Helsinki area, the scalability of the strategy requires a specific evaluation with the local situation. Government and decision makers should be engaged to ensure the practicality.

Reference & Appendix

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Appendix

Interviews - Allotment Gardeners (AG)

AG 01: 26.04.2019, semi-structured interview, female, 36, service team leader, vice secretary in allotment garden association

AG 02: 09.05.2019, semi-structured interview, female, 75, retired, secretary in allotment garden association, board member in Federation of Finnish Allotment Gardens

AG 03: 11.05.2019, semi-structured interview, female, 45, research nurse, chair person in allotment garden association

AG 04: 23.05.2019, semi-structured interview, female, 31, entrepreneur, airbnb host, member in allotment garden

AG 05: 08.05.2018, e-mail interview, female, board member in Federation of Finnish Allotment Gardens

Interviews - Community Gardeners (CG)

CG 01: 19.06.2019, semi-structured interview, male, language teacher and translator, board member in DODO

CG 02: 26.06.2019, semi-structured interview, male, board member in DODO

CG 03: 06.2018, semi-structured interview, female, service designer, board member in DODO

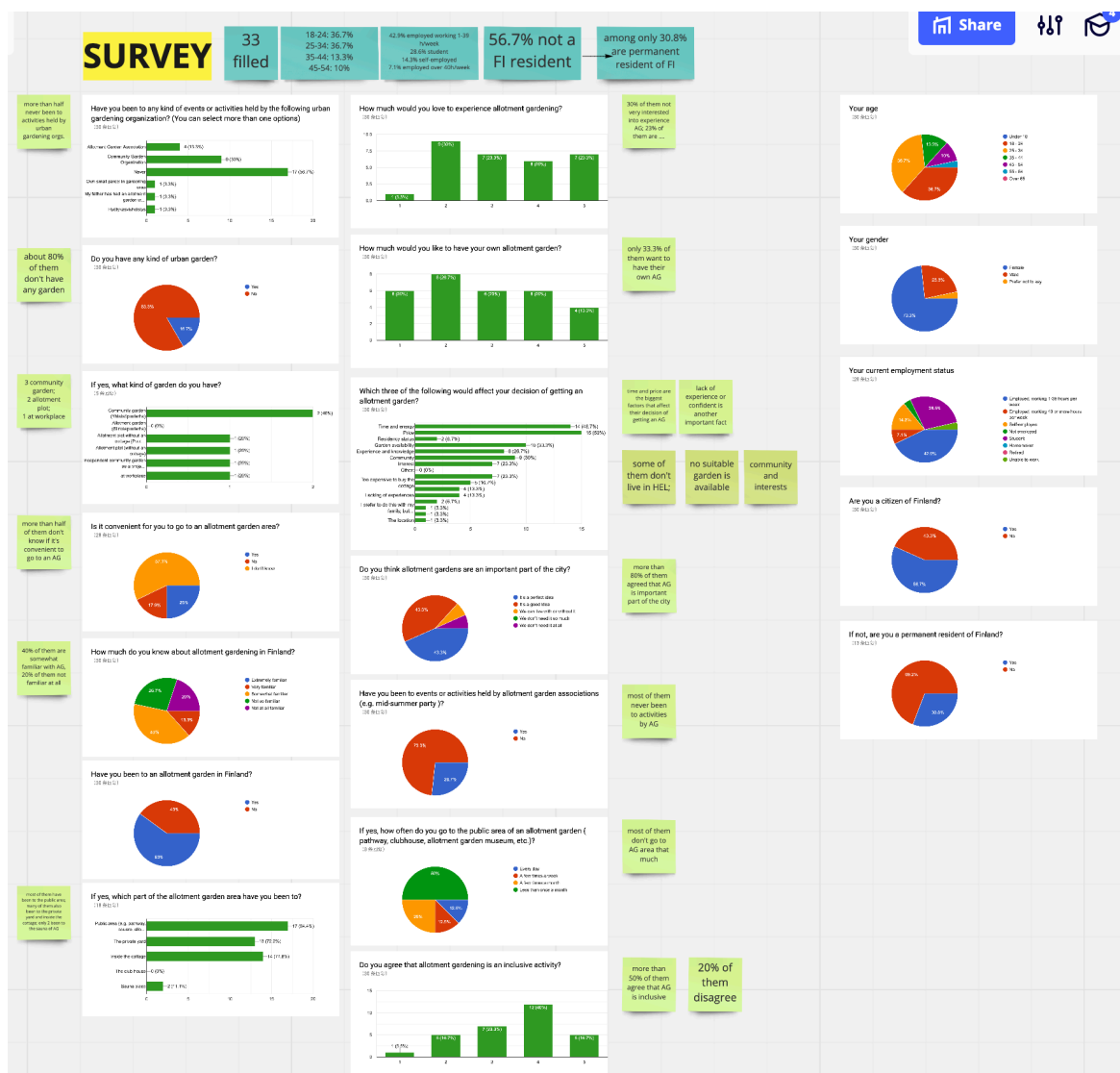
Interviews - City of Helsinki (CH)

CH: 04.09.2019, semi-structured interview, female, urban space and landscape planning, City of Helsinki

Participant Observation (PO)

PO: February - April, action group member, volunteer in DODO

SN: Survey results analysis screenshot



Co-creation Workshop (CW)

CW 01: Group 1: Poster making of allotment garden today



CW 02: Group 2: Poster making of allotment garden today



Persona Card 1

Just call me Panda
Occupation: Designer
Age range: 25-34

Responsibilities in allotment gardening:

Interests & hobbies
e.g. sports, music, reading, painting, gardening, meditation (yoga),

For allotment garden activities, I have enough:
e.g. money, time, motivation

However, I lack of:
e.g. money, time, motivation

My dream garden and the community in the future are:
can grow the organic food, prepare, eat or activities that we can do together.

Challenges to achieve my dream allotment garden are:
don't have enough time, not enough space in the urban (all my photos are taken after sunset), and some budget (plants are so expensive, so they are not practical).

Persona Card

Just call me Panda
Occupation: Mark Designer
Age range: 25

Responsibilities in allotment gardening:

Interests & hobbies
e.g. sports, music, reading, painting, gardening, meditation (yoga),

For allotment garden activities, I have enough:
e.g. money, time, motivation

However, I lack of:
e.g. money, time, motivation

My dream garden and the community in the future are:
can grow the organic food, prepare, eat or activities that we can do together.

Challenges to achieve my dream allotment garden are:
don't have enough time, not enough space in the urban (all my photos are taken after sunset), and some budget (plants are so expensive, so they are not practical).

Persona Card 1

Just call me Panda
Occupation: Mark Designer
Age range: 25

Responsibilities in allotment gardening:

Interests & hobbies
e.g. sports, music, reading, painting, gardening, meditation (yoga),

For allotment garden activities, I have enough:
e.g. money, time, motivation

However, I lack of:
e.g. money, time, motivation

My dream garden and the community in the future are:
can grow the organic food, prepare, eat or activities that we can do together.

Challenges to achieve my dream allotment garden are:
don't have enough time, not enough space in the urban (all my photos are taken after sunset), and some budget (plants are so expensive, so they are not practical).

Scenario 1

What if the future allotment garden...

CAN BE OWNED BY A GROUP OF PEOPLE

Flexible Ownership
e.g. rent, as a garden, hotel

Activities / facilities

Online Plan for meeting potential users

Catalogues only for rent (for ages)

Starter tutorial

Rules & Responsibilities

Registration with friends & strangers

2-4 gardens (for friends)

Max 5 years of rent only

Business model & sharing team

"GARDEN HOTEL"

CW 04: Group 2: Persona cards and future scenarios

Persona Card 2

Just call me: **SUNFLOWER**
Occupation: **Junior Landscaper**
Age range: **20-25**

Responsibilities in allotment gardening:
I'm gardening one bed, my main interest is in growing veg for my friends and family.

Interests & hobbies:
- nature, outdoor activities, yoga

For allotment garden activities, I have enough:
- money, time, knowledge

However, I lack of:
- experience, but will be willing to learn

My current goals for the future allotment gardening are:
- seeing everything & how it grows
- from a small seed
- seeing what it turns into
- harvest, growing, and seeing it flourish
- flowers and the garden and its beauty

My concerns for the future allotment gardening are:
- losing my garden one day (if I don't have enough time or health to look after it)

Persona Card 2

Just call me: **ALICE**
Occupation: **Junior Landscaper**
Age range: **20-25**

Responsibilities in allotment gardening:
- water to the allotment
- garden

Interests & hobbies:
- going through docs
- trying ideas in practice
- love bit and then...
- travelling & being home, maybe for example...
- passion

For allotment garden activities, I have enough:
- passion

However, I lack of:
- money, time, knowledge

My current goals for the future allotment gardening are:
- I can rent a piece of land without buying a cottage/ I can share a piece of land with others who have an allotment garden
- Sell some domestic vegetables/homemade food, maybe by what I grow
- Get some starter material from the community
- I can also put my garden as an experiment on social media
- Challenges to achieve my allotment garden are:
- Will this break the local laws?
- What if the house is possible if there is one a good channel to share it

Scenario

What if the future allotment garden...

Pick the food from the garden & pay the owner.

For the food that the owner has people from the food of the garden.

Each & every day, I'll be out there, I'll be out there, I'll be out there.

Each & every day, I'll be out there, I'll be out there, I'll be out there.

Activities / facilities

Pick & eat and some small business.

SHARED CAFE

making & selling facilities

small credit system

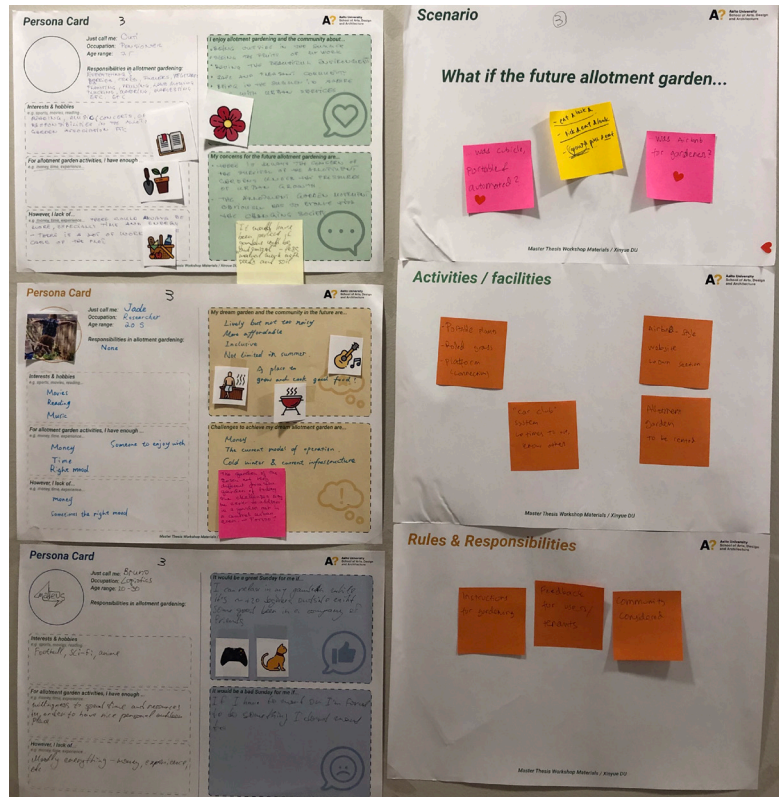
Rules & Responsibilities

The community will be responsible for organizing the whole thing.

small credit system, rules, which is the garden, which is the garden, which is the garden.

Each & every day, I'll be out there, I'll be out there, I'll be out there.

CW 05: Group 3: Persona cards and future scenarios



Prototype Testing and Evaluation (PE)

PE 01: Allotment gardeners - result mapping and scoring

Envisioning Helsinki Allotment Gardening in 2030 Prototype and Evaluation Results: Allotment Gardeners									
	I am willing to rent my allotment garden to visitors for a short period of time for a reasonable price.	I am willing to offer some special experience related to gardening for tourists.	I think staying in a garden can help visitors to learn about local culture.	I will not be disturbed if my neighbors rent their allotment garden to visitors for a short period of time.	The most attractive factor for me to rent out my allotment garden is	After hearing the story of the persona's journey, I feel:	I understand the benefits of renting out my allotment garden in the future.	If I travel to other cities or countries, I think garden hotel or the private garden is a good way to spend a weekend.	I agree with the scenario that I have to pay more to stay in a garden hotel than in a private garden.
A. short-term renting									
person 1	4	4	3	3	3 life - earning some extra money - let the tourist experience and know more about the garden	2	3	5 yes	
person 2	3	4	5	3	3 life - earning some extra money - let the tourist experience - making new friends - making good use of the garden - earning some credits for volunteer works	4	4	5 no	
B. long-term renting									
person 1	4	2	3	4	4 self-achievement self-achievement	not enough time not enough time			
person 2	2	4	2	2	5				
C. volunteer badges									
person 1	4	4	4	4	4	4	4	4	4
person 2	4	4	4	4	4	5	5	4	3

PE 02: The wider community - result mapping and scoring

Envisioning Helsinki Allotment Gardening in 2030 Prototype and Evaluation Results: The wider community										
A volunteer badges	If I have one free afternoon, I would like to do gardening volunteer work	The most attractive factor for me to do garden volunteer work is:	From my perspective, the most important factor to encourage gardeners and volunteer to use the platform is:	I think doing volunteer work in allotment garden is a good way to learn gardening skills.	I think by providing detailed information on the platform, I can more precisely find volunteer gardening work suitable for me.	Seeing the badges I can get for doing one volunteer work, I feel:	When receiving my achievement of doing gardening volunteer work and collecting the badges, I feel:	After hearing the story of the persona's journey, I feel:	I understand what I should do to find allotment garden volunteer work and what are the benefits by doing it in the future.	comments feedback
person 1	4	- experience garden life - making new friends - get close to nature	mutual benefit opportunities to make new friends	4	3	4	4	4	4	4 - no feedback/review system
person 2	2.5	- learning gardening skills - exp garden life - make new friends	mutual benefit	4	3	4	4	4	4	
person 3	4	- learn garden skills	mutual benefit	5	4	3	5	5	5	
	Garden Hotel			Private Garden						
B short-term renting	If I am a tourist, I will be attracted by the garden hotel if it is at an affordable price.	I think staying in a garden hotel is a good opportunity to learn about local culture.	I think the garden hotel is a good way to enjoy the nature.	If I am a tourist, I will be attracted by the private garden if it is at an affordable price.	I think staying in a private garden is a good opportunity to learn about local culture.	I think the private garden is a good way to enjoy the nature.	The most important factor for me to make a decision between garden hotel and private garden is:	After hearing the story of the persona's journey, I feel: engaged/distant	I will be even more interested in the garden hotel/private garden if the following can be provided:	If I am a local resident, I think the scenario that I have to pay more to stay in a garden hotel than in a private garden.
person 1	4	4	5	3	4	5	- price - convenience - gardening exp - price	4	can go as a family & if it is child friendly	5 yes
person 2	5	4	4	4	5	5	price	4	work/affordability of stay is clear detailed info (visual/text) about the place I'm going to live	4 yes
Person 3	5	4	5	5	5	5	price	5	-	yes
C. Long-term renting	If I plan to purchase an allotment garden, I would like to have a trial period before making the decision.	I think a long-term trial period is helpful for me to learn gardening skills.	I think it is acceptable that I have to move out and look for another allotment garden after one year if I decide to purchase one.	I think the flexibility of the long-term renting is worth the risk.	I think the most important factor that encourage me to have a long-term renting is:	I think the most important factor that discourage me from having a long-term renting is:		D. shared ownership	I think the most important factor that encourages people to share the allotment garden with others is	I think the most important factor that discourage people from sharing the allotment garden with others is
Person 1	5	5	4	5	- lower risk before committing large amount of money - in-depth exp of allotment gardening before making permanent commitment	having to move out after the trial period and havt to adapt to the new neighborhood again		person 1	lower cost	troubles when dividing allotment area
person 2	3.5	4	3	3	- in-depth exp	the risk of being unable to find a suitable one to buy		person 2	- sustained motivation to keep on gardening work - closer relationship with each other	different wants from the same space
person 3	5	4	2	3	- in-depth exp	having to move out after the trial period and havt to adapt to the new neighborhood again		person 3	- lower cost - sustained motivation to keep on gardening work - sharing workload of garden maintenance	- not knowing each other well enough - not sure of the commitment and different gardening style - B is good, but split the garden only



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